National Library of Canada
Bibliothèque nationale du Canada

Canadian Theses Service
Service des thèses canadiennes

Ottawa, Canada
K1A 0N4

NOTICE

The quality of this microform is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Reproduction in full or in part of this microform is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30, and subsequent amendments.

AVIS

La qualité de cette microforme dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

La reproduction, même partielle, de cette microforme est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30, et ses amendements subséquents.

NL-339 (r. 88/04) c

Canada

UNIVERSITY OF ALBERTA

INDICATORS OF EFFECTIVENESS IN SENIOR HIGH SCHOOLS

BY

SHIRLEY SYLVIA MACHURA

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

EDMONTON, ALBERTA

FALL 1991

National Library of Canada
Bibliothèque nationale du Canada

Canadian Theses Service
Service des thèses canadiennes

Ottawa, Canada
K1A 0N4

The author has granted an irrevocable non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of his/her thesis by any means and in any form or format, making this thesis available to interested persons.

The author retains ownership of the copyright in his/her thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without his/her permission.

L'auteur a accordé une licence irrévocable et non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de sa thèse de quelque manière et sous quelque forme que ce soit pour mettre des exemplaires de cette thèse à la disposition des personnes intéressées.

L'auteur conserve la propriété du droit d'auteur qui protège sa thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

ISBN 0-315-69995-7

Canada

UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR: Shirley Sylvia Machura

TITLE OF THESIS: Indicators of Effectiveness in Senior High Schools

DEGREE: Doctor of Philosophy

YEAR THIS DEGREE GRANTED: 1991

Permission is hereby granted to the University of Alberta library to reproduce single copies of this thesis and to lend or sell such for private, scholarly or scientific research purposes only.

The author reserves all other publication and other rights in association with the copyright in the thesis, and except as hereinbefore provided neither the thesis nor any substantial portion thereof may be printed or otherwise reproduced in any material form whatever without the author's prior written permission.

Shirley Machura

13404 - 71 Street
Edmonton, Alberta
T5C 0M8

Date: October 4, 1991

UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled INDICATORS OF EFFECTIVENESS IN SENIOR HIGH SCHOOLS submitted by SHIRLEY SYLVIA MACHURA in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY in EDUCATIONAL ADMINISTRATION.

Supervisor, Dr. E. W. Ratsoy

Dr. D. A. MacKay

Dr. E. Miklos

Dr. K. L. Ward

Dr. W. D. Wilde

External Examiner, Dr. G. B. Isherwood

Date: September 26, 1991

Dedicated

To WALTER

For his patience

ABSTRACT

This study identified differences and similarities in administrative behavior, administrative structure, school climate, and specific school attribute variables between the more effective and less effective senior high schools.

Schools were categorized as more effective or less effective according to the results on three global effectiveness measures: overall effectiveness, overall satisfaction, and school pride.

A questionnaire was used to collect information from teachers in a random sample of 43 senior high schools in the province of Alberta and quantitative data analysis techniques were employed. Teachers reported the frequency of specific administrative behaviors they observed, the characteristics of the organizational structure in their schools, their degree of satisfaction with various aspects of the work climate, and the extent to which practices or conditions contributing to effectiveness were characteristic of their schools.

It was assumed that the administrators were the initiators or the driving force in achieving effectiveness in the schools. Analysis of their behaviors was based on Mintzberg's (1973) categories of interpersonal, informational, and decisional roles. The liaison and figurehead behaviors of the interpersonal category and the

disseminator behaviors of the informational category received particularly high scores overall.

Statistically significant differences between the more effective and less effective schools were achieved for the 10 administrative behavior variables; the decentralization dimension of administrative structure; the climate dimensions of cohesiveness, commitment, and empowerment; and the five specific school attributes: achievement emphasis, administrative leadership, support for school activities, student attentiveness, and teacher recognition. There was no statistically significant difference between the two groups of schools on the formalization dimension of administrative structure.

The factor which best predicted the global measure of overall effectiveness was achievement emphasis, a specific school attribute. Empowerment, a dimension of school climate, was the best predictor of the other two global measures of effectiveness: overall satisfaction and school pride.

ACKNOWLEDGMENTS

The completion of study was possible due to considerable assistance from many people. Their assistance was appreciated and is gratefully acknowledged. Thanks are extended to the following:

The teachers and principals of the 43 schools participating in the study for taking the time to respond to questionnaires.

Dr. E.W. Ratsoy, my supervisor, for overseeing the study to its completion, providing guidance and encouragement along the way.

Dr. E. Miklos and Dr. D.A. MacKay, members of my supervisory committee, for providing helpful advice at the various stages of the research.

Chris Prokop for contributing invaluable statistical assistance.

My husband, Walter, for providing unfailing encouragement and for never doubting that this study would be completed.

TABLE OF CONTENTS

PAGE

CHAPTER ONE 1

INTRODUCTION TO THE STUDY 1

Purpose of the Study 4
Research Questions 4

Significance of the Study 5

Definitions of Terms 9

Delimitations 11

Limitations and Assumptions 11

Organization of the Thesis 12

CHAPTER TWO 14

REVIEW OF THE LITERATURE 14

Theoretical Perspectives for the Study of Organizational Effectiveness 14
The Goals Perspective 15
The Systems Perspective 16
The Multidimensional Perspective 18
Summary 20

The Concept of Organizational Dynamics . . . 22
Kotters' Theory of Organizational Dynamics 22
The Dynamics of Coalignment 23
Summary 27

School Effectiveness Research 28
Introduction 28
Principal Behavior and Administrative Structure 30
Principal Behavior and School Climate . 32
Leadership and Other Specific School Attributes 37
Summary 42

Summary 44

CHAPTER THREE 47

FRAMEWORK FOR STUDYING SCHOOL EFFECTIVENESS . . . 47

Implications of Organizational and School Effectiveness

Literature for This Study 49

Organizational Elements 53
Administrative Behavior 54
Administrative Structure 59
School Climate 60
Specific School Attributes 62

Global Measures of Effectiveness 65
Overall Effectiveness 66
Overall Satisfaction 68
School Pride 69
Summary 70

CHAPTER FOUR 72

RESEARCH DESIGN, INSTRUMENTATION, AND METHODOLOGY 72

Research Design 72
Nature of the Study 72
The Sample 73
Selecting Questionnaire Respondents . . 74
Guidelines for the Research Design . . . 75

Instrumentation 77
Research Instrument: Inventory of School Operations 77
Secondary School Effectiveness Survey . 82
Reliability of Inventory of School Operations 83

Research Methodology 84
Data Collection 84
Data Analysis 86
Categorization of Schools 89

Presentation of the Findings 90

CHAPTER FIVE 91

FACTORS, EFFECTIVENESS INDICATORS, AND SCHOOL CHARACTERISTICS 91

Part A. Administrative Behavior 91
Interpersonal Role Factors 92
Informational Role Factors 95
Decisional Role Factors 97

Part B. Administrative Structure 100
Formalization 100
Decentralization 102

Part C. School Climate 103
Empowerment 103
Cohesiveness 106
Commitment 106

Part D. Secondary School Effectiveness
Survey 107
Achievement Emphasis 110
Support for School Activities 110
Administrative Leadership 111
Student Attentiveness 111
Teacher Recognition 112
School Pride 112

Global Measures of Effectiveness 113
Overall Effectiveness 113
Overall Satisfaction 114
School Pride 115

Categorization of Schools 116
First Stage 116
Second Stage 119
Third Stage 120
Fourth Stage 123

Characteristics of the Schools 123
School Setting 126
Grades Served 126
Number of Students 127
Number of Full-time Equivalent Certified Teachers 128
Number of Assistant/Vice Principals . 129
Number of Department Heads 129

Summary 130

CHAPTER SIX 133

PROFILES OF ORGANIZATIONAL ELEMENTS AND SPECIFIC SCHOOL ATTRIBUTES 133

Comparison of Means 133
Administrative Behavior 136
Administrative Structure 141
School Climate 145
Specific School Attributes 1 8

Profiles of More Effective and Less Effective Senior High Schools on all Factors . . 152

Predictors of Global Measures of Effectiveness 157
Overall Effectiveness Global Measure . 157
Overall Satisfaction Global Measure . 159
School Pride Global Measure 161

Summary 162

CHAPTER SEVEN 165

DISCUSSION OF THE FINDINGS 165

School Administrators in Action 165
Interpersonal Role 166
Informational Role 168
Decisional Role 170
Summary 172

Administrative Behavior and Administrative Structure 173

Administrative Behavior and School Climate 176

Specific School Attributes 180

Predictors of Global Effectiveness in Schools 182
Overall Effectiveness 183
Overall Satisfaction 185
School Pride 187

Summary 188

CHAPTER EIGHT 190

SUMMARY, CONCLUSIONS, AND IMPLICATIONS 190

Overview of the Study 190

Summary and Conclusions 193
Administrative Behavior 193
Administrative Structure 195
School Climate 196
Specific School Attributes 198
Factors Predicting Global Effectiveness 199

Implications 201
Theoretical Implications 201
Implications for Practice 205
Implications for Research 210

Concluding Remarks 213

REFERENCES 215

APPENDIX A: Correlation Matrix 224

APPENDIX B: Inventory of School Operations . 226

APPENDIX C: School Information Questionnaire 237

APPENDIX D: Letters to Superintendents, Principals, and Teachers 239

APPENDIX E: Curriculum Vitae 244

LIST OF TABLES

TABLE		PAGE
Table 3.1	A Checklist of Organizational Effectiveness Categories and Indicators	51
Table 3.2	Categories of Roles, Activities, and Specific Administrative Roles	56
Table 4.1	Questionnaire Reliability Coefficients . .	84
Table 4.2	Criterion Measures for the Organizational Elements and Specific School Attributes . .	86
Table 5.1	Rotated Varimax Three Factor Solution for Nine Interpersonal Role Administrative Behavior Items	93
Table 5.2	Rotated Varimax Three Factor Solution for Seven Informational Role Administrative Behavior Items	96
Table 5.3	Rotated Varimax Four Factor Solution for Ten Decisional Role Administrative Behavior Items	98
Table 5.4	Rotated Varimax Two Factor Solution for Ten Administrative Structure Items	101
Table 5.5	Rotated Varimax Three Factor Solution for Twenty School Climate Items	104
Table 5.6	Rotated Varimax Five Factor Solution for Twelve Secondary School Effectiveness Items	108
Table 5.7	Rotated Varimax Factor Solution for Item Used as Global Effectiveness Measure . .	113
Table 5.8	Mean Scores of Senior High Schools on Global Effectiveness Measures	117
Table 5.9	Results of *t*-Tests for Mean Scores of More Effective (Group 1) and Less Effective (Group 2) Schools on Global Measures of Effectiveness	121
Table 5.10	Characteristics of Schools	124
Table 6.1	Mean Scores of More Effective (Group 1) and Less Effective (Group 2) Schools for All Variables	134

Table 6.2 Results of t-Tests for Mean Scores of More Effective (Group 1) and Less Effective (Group 2) Schools on Administrative Behavior 137

Table 6.3 Results of t-Tests for Mean Scores of More Effective (Group 1) and Less Effective (Group 2) Schools on Administrative Structure 142

.able 6.4 Results of t-Tests for Mean Scores of More Effective (Group 1) and Less Effective (Group 2) on School Climate 146

Table 6.5 Results of t-Tests for Mean Scores of More Effective (Group 1) and Less Effective (Group 2) Schools on Specific School Attributes 150

Table 6.6 Results for Multiple Regression Analysis (Stepwise) for Overall Effectiveness . . 158

Table 6.7 Results for Multiple Regression Analysis (Stepwise) for Overall Satisfaction . . . 160

Table 6.8 Results for Multiple Regression Analysis (Stepwise) for School Pride 162

LIST OF FIGURES

FIGURE		PAGE
Figure 3.1	Model of the Dynamics of Selected Elements and Specific School Attributes in Effective Senior High Schools	48
Figure 5.1	Profiles of More Effective Schools and Less Effective Schools on Global Effectiveness Measures	122
Figure 6.1	Profiles of More Effective Schools and Less Effective Schools on Administrative Behavior	138
Figure 6.2	Profiles of More Effective Schools and Less Effective Schools on Administrative Structure	143
Figure 6.3	Profiles of More Effective Schools and Less Effective Schools on School Climate . . .	147
Figure 6.4	Profiles of More Effective Schools and Less Effective Schools on Specific School Attributes	151
Figure 6.5	Profiles of More Effective Schools, Less Effective Schools, and Entire Sample of Schools on All Factors	153

CHAPTER ONE

INTRODUCTION TO THE STUDY

> Organizational effectiveness is a construct. Constructs are abstractions that exist in the heads of people, but they have no objective reality. They cannot be pinpointed, counted or observed. They exist only because they are inferred from the results of observable phenomena. They are mental abstractions designed to give meaning to ideas or interpretations (Cameron & Whetten, 1983, p. 7).

Cameron and Whetten (1983) have aptly applied the metaphor "construct" to organizational effectiveness. To give organizational effectiveness an objective reality or to observe it, is difficult. Evidence of this is the fragmented and noncumulative literature on the effectiveness theme (Mott, 1972; Goodman & Pennings, 1977; Steers, 1977; Cameron & Whetten, 1983; Harrison, 1987). There is little agreement among scholars and researchers on what organizational effectiveness means or how to assess it.

Effectiveness has been described in terms of the dynamics of organizations in a number of theories on organization. In the goals perspective the dynamics are viewed as the actions performed to achieve desired ends. A broader view is taken of organizational dynamics within the systems perspective in which attention is focussed on the interaction of the organization with its environment and the alignment or nonalignment of the structural elements

composing the organization. Additionally, dynamics are also inherent in process activities such as decision making, communication, or information gathering which occur in organizations, and these activities may also be examined when organizational effectiveness is assessed.

Effectiveness of nonprofit organizations, such as schools, is particularly difficult to assess since groups and individuals strive to attain goals not easily measured by productivity indicators such as profit or quantity of goods produced. As Meyer, Scott, and Deal (1983) point out, schools look particularly weak and inept when organizational theories emphasizing structures built around the coordination of technical production and exchange are applied (p. 410). But, they also emphasize that school organizations have been spectacularly successful. Schools seldom fail, as many businesses do. Schools are consistently funded, and personnel and programs are stably maintained (Meyer, Scott, & Deal, 1983, p. 410).

Not all schools are as successful as others, however, and research on school effectiveness is conducted to find out why. For example, Corcoran and Wilson (1988), studied the characteristics of 571 secondary schools recognized for excellence in education in the Secondary School Recognition Program during a three-year period to find out why these schools were more successful than others (p. iii). Their conclusions regarding variables associated with effective

schools are similar to those of other researchers (Spady, 1973; Glasman & Biniaminov, 1981; Purkey & Smith, 1983; Cohen, 1983; MacPhail-Wilcox & King, 1986). These variables include leadership, clear goals, an orderly school climate, high expectations and standards, and frequent monitoring and assessment of student progress. Nonetheless, a need continues to exist for more precise operational criteria of effectiveness for schools to identify factors which may inhibit effectiveness and for instruments to assess effectiveness.

The present study attempted to meet this need and to add to the body of literature accumulating on school effectiveness. It was focussed on the senior high school and investigated the differences and similarities between more effective and less effective schools on a number of indicators drawn from the literature on effectiveness in organizations generally, and school organizations in particular. The behavior of school administrators, organizational structure of schools, school climate, and the nature of specific school attributes were examined. Three global measures of effectiveness: overall effectiveness, overall satisfaction, and school pride, were used to establish the criteria for judging which schools were more effective.

Purpose of the Study

The purpose of the study was to identify differences and similarities in administrative behavior, administrative structure, school climate, and specific school attributes in senior high schools of differing degrees of judged effectiveness. Teachers' perceptions of the nature of administrative behavior, administrative structure, school climate, and specific school attributes were sought.

The following research questions guided the investigation.

Research Questions

1. What differences, if any, are there in administrative behavior between the more effective and less effective senior high schools?

2. What differences, if any, are there in administrative structure between the more effective and less effective senior high schools?

3. What differences, if any, are there in school climate between the more effective and less effective senior high schools?

4. What differences, if any, are there in specific school attributes between the more effective and less effective senior high schools?

5. What factors are the best predictors of global measures of effectiveness in senior high schools?

Significance of the Study

With dwindling fiscal resources being available for educational expenditures, public pressures demanding accountability for the monies spent on education have increased. The Department of Education in the province of Alberta, for example, made school and school district assessments mandatory in 1984 (Alberta Education Program Policy Manual, 1984). The evaluation policies are still in effect. Hence, there is continuing need for more precise criteria to judge effectiveness and for better instruments to assess the effectiveness of schools and school districts.

Some instruments have already been developed for use in assessing the effectiveness of schools (Wilson, Firestone, & Herriott, 1985; Andrews, 1987) and school districts (Ratsoy & Miklos, 1985). Ratsoy and Miklos (1985), who developed and used detailed questionnaires consisting of five scales to collect information about an Alberta school district, suggested that further exploratory research be undertaken to increase the usefulness of the instruments. The conceptual bases for their study were rooted in the multidimensional theoretical model of effectiveness in educational organizations proposed by Ratsoy (1983).

Giles (1987) made further use of the Ratsoy and Miklos (1985) instrument, "Inventory of School District Operations", to collect information on the effectiveness of a school district in Newfoundland. The Ratsoy and Miklos (1985) instrument was utilized in the present study as well, but it was used, for the first time, to collect information relevant to the effectiveness of schools. Several scales were selected from the Ratsoy and Miklos (1985) school district study and adapted for use in secondary schools. Others were developed especially for the current study.

Hoy and Ferguson (1985), who also used a multi-dimensional approach to assessing organizational effectiveness in secondary schools, recommended that researchers continue to pursue a "programmatic line of inquiry" (p. 132). In their view, "the current disarray in the effectiveness research should yield to more systematic and cumulative efforts" (Hoy & Ferguson, 1985, p. 132). The present study followed a programmatic line of inquiry by building on the work of Ratsoy (1983), Ratsoy and Miklos (1985), Hoy and Ferguson (1985), and others. The multidimensional nature of effectiveness was recognized and a number of indicators from the cluster of personnel, organizational, and environmental categories of the Ratsoy model (Ratsoy, 1983, p. 5) were selected for analysis in accordance with Kotter's (1978) model of organizational dynamics.

Kotter (1978), in developing his organizational dynamics theory, discusses three major conditions of a highly effective organization, one of which is coalignment of the elements:

> 1. Key processes are in an efficient and effective state.
> 2. Structural elements are coaligned.
> 3. Structural elements are in highly adaptive states (p. 67).

The concept of coalignment, that is, the fitting together of organizational elements, and its relationship to effectiveness has been advanced by other researchers (Woodward, 1965; Lawrence & Lorsch, 1967; Harrison, 1987). The coalignment of three major elements of school organization: administrative behavior, administrative structure, and school climate, was examined in the current study to see how these elements fit together in effective senior high schools.

Many recent studies dealing with school effectiveness support the importance of the principal's role as a leader in influencing other factors within the school (Miskel, 1977; Edmonds, 1981; Sweeney, 1982; Leithwood & Montgomery, 1982; Mortimore & Sammons, 1987). McDaniel (1984) summarizes the leadership role of principals as follows:

> Principals can provide schools with assertive, achievement-oriented leadership; an orderly, purposeful, and peaceful school climate; high expectations for staff and pupils; and well-designed objectives and evaluation systems (p. 15).

Approximately twenty years earlier, Likert (1961) had theorized that administrative actions and decisions influence the shared sentiments of the people within the organization. Hence, the behavior of the principal and that of other staff members performing administrative tasks within the school was considered as the "driving force" (Kotter, 1978, p. 52) affecting the alignment of the other elements (administrative structure and organizational climate) of the school. By examining administrative behavior we may better understand how school administrators influence the organizational structure and climate in the more effective schools.

As noted by Mazzerella (1985), and Cotton and Savard (1980), much of the research on the effectiveness of schools and their leaders has been carried out in elementary schools. Whether these findings apply to secondary schools is uncertain. Corcoran and Wilson (1988) note that differences between the elementary and secondary schools may be attributed to differences in goals, structure, and instructional organization (p. 25). One example of these differences is that principals have larger spans of control in secondary schools giving teachers greater autonomy in carrying out their tasks (Corcoran & Wilson, 1988, p. 25). In keeping with this line of reasoning, the current investigation can be justified in that it aims at providing some insight into organizational elements and specific

school attributes that are associated with effectiveness at the secondary level of schooling, particularly in senior high schools.

Definitions of Terms

Following are the definitions of terms specific to this study.

School effectiveness. The ratings of the teachers on the criteria provided for the perceived overall effectiveness of their schools, overall satisfaction with the work climate in their schools, and pride in their schools.

Elements. The components of an organization. In this study, the focus is on three major organizational elements: administrative behavior, administrative structure, and school climate.

Organizational dynamics. "The relationships - aligned or nonaligned - among the structural elements" (Kotter, 1978, p. 64). The aligned (or nonaligned) relationships among administrative behavior, administrative structure, and school climate, were examined in the present study.

Coalignment. The extent to which the elements of the school (administrative behavior, administrative structure, and climate) are compatible with each other. Coalignment is the "congruence" or "fit" among organizational elements (Kotter, 1978, p. 39; Harrison, 1987, pp. 74-75).

School climate. "Climate is a relatively enduring quality of the school environment that is experienced by teachers, affects their behavior, and is based on their collective perceptions of behavior in schools" (Hoy & Miskel, 1987, pp. 225-226). Broadly defined, it is the teachers' perceptions of the work environment of the school and the social relationships of its members.

Administrative structure. A pattern of internal activities within the school which regulates the work of the staff members. Formalization and decentralization were the dimensions of administrative structure examined in the current study.

Formalization. "...extent that work has been standardized and the amount of leeway that is permitted from such standards" (Aiken & Hage, 1966, cited in Hoy et al., 1983, p. 111).

Decentralization. "...extent to which various types of power and authority are extended down through the organizational hierarchy" (Steers, 1977, p. 60).

School administrators. Unless otherwise stated, school administrators are the administrative personnel of the senior high school consisting of the school principal, assistant and/or vice principal(s), and/or department head(s).

Senior high school. A secondary school in Alberta for students in Grades 10, 11, and 12. In this study, some of the schools also had students enrolled in Grades 7, 8 and/or 9.

Delimitations

1. Data were collected from teachers in 43 Alberta senior high schools.

2. Data were collected near the end of the first semester period of the 1988-89 school year and the beginning of the second semester. The first semester spans the months of September to January, whereas the second semester extends from February to June.

3. Only three organizational elements, administrative behavior, administrative structure, and school climate; and one outcome measure, satisfaction, from Ratsoy's (1983) checklist of effectiveness categories and indicators were selected for analysis in this study. Others, such as adaptability, professionalism, and interorganizational linkages, were not included.

Limitations and Assumptions

A major limitation of the study is that it relies heavily on teachers' perceptions of administrative behavior,

administrative structure, school climate, and specific school attributes within the senior high schools. Perceptual data have a disadvantage in that they may be influenced by the personal biases of the respondents.

One assumption underlying the study is that teachers are knowledgeable about various aspects of the selected organizational elements (administrative behavior, administrative structure, and school climate) and specific school attributes being researched.

All staff performing administrative tasks within a school (principals, assistant/vice principals, and department heads) were treated as a group and the assumption was made that they work as a team to implement policies and monitor the school's activities. It was also assumed that school administrators as the formal leaders within the school influence the way in which the administrative structure, school climate, and specific school attributes fit together or are coaligned.

Organization of the Thesis

This chapter provides an introduction to the study. Related research literature is reviewed in the next chapter. The conceptual framework which guided the investigation is presented in chapter three. Chapter four details the methodological procedures used to study the differences and

similarities in the variables associated with effectiveness between the more effective and less effective senior high schools.

Chapter five discusses the results of the varimax factor analysis which yielded the variables and indicators of effectiveness used in the current study, and describes the characteristics of the more effective and less effective schools. Chapter six presents the research findings. These findings are discussed in chapter seven. The final chapter, chapter eight, presents a summary of the results and provides some implications of the study findings for theory, practice, and further research.

CHAPTER TWO

REVIEW OF THE LITERATURE

Three major sections comprise the review of the literature. In the first section, three general theoretical perspectives for the study of organizations are presented. The differing relationships that might exist among organizational elements, particularly the notion of coaligned relationships and the concept of organizational dynamics are discussed in the second section.

The third section deals with that body of research and scholarly writing on effective schools which is concerned with how principals may shape the organizational controls and climate within the schools. The relationship between leadership and other specific school attributes such as emphasis on student achievement, monitoring of the instructional program, recognition of teacher achievement, and school-community relationships is also discussed.

Theoretical Perspectives for the Study of Organizational Effectiveness

Different approaches to the understanding and assessment of organizational effectiveness are taken by researchers. These differences are evident in the views

taken about the nature and origin of organizational goals and purposes, and about how the environment of an organization is seen to affect the functioning of the organization. There appear to be three general perspectives to organizational assessment in the literature.

The Goals Perspective

Within the goals perspective, goals are viewed as a means to an end. This approach to organizational assessment sees goals as formulated to achieve objectives deemed necessary to make the organization successful. Effectiveness is defined "in terms of criterion measures of how well goals are being achieved" (Ratsoy, 1983, p. 2). Scott (1987) explains that the general criteria for the goal models include "measures of total output and of quality, productivity, and efficiency" (p. 321). Not much notice is taken of the effect of the larger social or cultural context on the ability of the organization to achieve its goals.

The goals perspective has been criticized for being too narrow in focus. The models used in assessing the effectiveness of organizations from this perspective are univariate in nature, i.e. having one criterion measure. Thus the multiplicity of goals may be overlooked, the focus may be only on those goals set by the administration rather than those identified by others in the organization, or the

focus may be on the official rather than the operative goals (Hoy & Ferguson, 1985; Hoy & Miskel, 1987).

The use of goals models, however, has been given some support. Cameron (1980) states that such models are "especially useful when organization goals are clear, consensual, and measurable as with a professional hockey team whose goal is to win games" (p. 68). Ratsoy (1983) points out that one focus of an organizational effectiveness assessment might be to determine the extent to which the real goals (operative) being pursued differ from the officially stated ones (p. 5). Hence using the goals perspective depends upon the purpose for assessment.

The Systems Perspective

Scott (1987), who develops the systems perspective to understanding organizational functioning, describes organizations as being "highly interdependent with their environments and engaged in system-elaborating activities as well as in system-maintaining activities" (p. 321). Attention is directed to the morphogenetic and morphostatic processes in assessing effectiveness. But, not only is a process view taken for understanding the internal operations of the system, this view has also been adopted for analysing the organization itself as a system persisting over time. In order to survive, an organization has to adapt and to change.

The models constructed within the systems perspective are generally multivariate in that they utilize multiple criteria for judging effectiveness. A focus on the total system, the processing of inputs through system activity into system output, on feedback activities such as communication, or on the outcomes or products relative to their impact on the system or its environment is possible (Immegart & Pelecki, 1973, pp. 45-47). Researchers emphasize different aspects. The criteria of effectiveness usually include adaptability and flexibility, and may also include measures of participant satisfaction and morale, the interpersonal skills of managers, and survival itself (Scott, 1987; Cameron, 1980).

Harrison (1987) claims that the systems model provides practitioners with a comprehensive yet flexible guide to examining the main features of an organization and understanding their relationships (p. 27). However, a major weakness of the systems model is use of process indicators of effectiveness for which there are many operational definitions. For example, performance may be defined in terms of units of work, job satisfaction, reduced turnover, absenteeism, student achievement, or quality of teaching. As Steers (1975) advises, such operational criteria of effectiveness may have to allow for a considerable amount of error in measurement (p. 553).

The Multidimensional Perspective

Many scholars (Steers, 1977; Hoy, 1982; Seashore, 1983; Cameron & Whetten, 1983; Ratsoy, 1983; Sander & Wiggins, 1985; Hoy & Miskel, 1987) have suggested that a multidimensional perspective to assessing organizations is most effective. The potential relevance of three interrelated dimensions is emphasized: the notion of goal optimization, the system's perspective of an organization's interdependence with its environment, and an emphasis on the behavior of individuals and groups in the organization.

In proposing models of organizational effectiveness, some scholars have recognized the multidimensional nature of organizations. Steers (1977), for example, proposes a process model defining effectiveness as the "organization's capacity to acquire and utilize its scarce and valued resources as expeditiously as possible in the pursuit of its operative and operational goals" (p. 5). Likewise, Hoy and Miskel's (1987) integrated goal-setting system resource model was derived "by having the four necessary functions of social systems: adaptation, goal attainment, integration, and latency act as operative goals" (p. 394). A multidimensional model, developed by Ratsoy (1983) includes five major categories of effectiveness indicators: goals, other outcome measures, personal characteristics, organizational variables, and environmental variables. The model developed by Mott (1972) relates characteristics of

organizational processes, such as decision making, structure, individual needs, and leadership to organizational effectiveness. Mott's (1972) effectiveness criteria include quantity and quality of product, efficiency of production, and the adaptability and flexibility of the organization.

In all of these models, the broad range of organizational outcomes, concern with the environment, and internal problems faced by the organization are addressed. Although a major advantage of the models is their comprehensive nature, an inherent potential weakness is that the multiple criteria may be in conflict with one another. Steers (1975) illustrates this possibility by using the criteria of productivity and satisfaction as examples:

> Productivity can be increased - at least in the short-run - by pressuring workers to put forth their maximum effort, potentially resulting in decreased job satisfaction. Satisfaction, on the other hand, could possibly be increased by easing work pressures and strain or by granting workers increased leisure time, thus having a potentially adverse effect on productivity (p. 553).

The problem of juxtaposing mitigating criteria is not an easy one to solve. As Steers (1977) observes, there are many criteria from which to choose, particularly for multivariate models, all of which may be relevant (pp. 43-46).

The multidimensional perspective to assessing effectiveness in schools appears to be the most feasible. Schools by virtue of their structure within a hierarchy, their participants, their technology, and their interaction

with the environment embody some aspect of every perspective being taken in the field of organization theory. They have been alternatively described as social systems (Campbell et al., 1977), loosely-coupled systems (Weick, 1976), professional bureaucracies (Mintzberg, 1979), rational bureaucracies (Anderson, 1968), and anarchies (Firestone & Herriott, 1982) among others. This diversity of descriptions appears to stem from the application of a myriad of theories about organizations in order to understand the phenomena of schools. School effectiveness research may yield more systematic and cumulative information if, as Hoy and Ferguson (1985) have suggested, a more programmatic line of inquiry were followed (p. 132), and a multidimensional perspective to the study of school effectiveness were consistently applied.

Summary

The major theoretical issues associated with the assessment of organizational effectiveness stem from the apparent ambiguity surrounding the construct of effectiveness. First, there is no clear definition of organizational effectiveness. Second, there is some question regarding which approach should be taken to yield the desired result. Third, there is no agreement regarding the most viable model to use in assessing organizational effectiveness.

The many models that have been constructed to assess organizational effectiveness makes it difficult to make choices. The earlier models were largely univariate, using only one measure of organizational success. Although these models are still used, current models are multivariate and strive to measure effectiveness in terms of a set of relevant criteria.

Selecting a particular model is usually dependent on the perspective taken. For example, the goals perspective will focus attention on the goal models where the effectiveness criterion is the attainment of goals. For the multidimensional perspective one can choose from a variety of models, the choice of which can lead to further decisions regarding which criteria to use in assessing organizational effectiveness.

Allison (1983) emphasizes that for educational organizations the power of organizational models and theories will be realized only when they are selected, interpreted, and modified through clearly articulated conceptualizations of schools that can emerge only from the direct study of schools (p. 8). Schools, however, are complex organizations. Therefore, multidimensional models, such as those proposed by Mott (1972), Steers (1977), Kotter (1978), Ratsoy (1983), Hoy and Miskel (1987), and Harrison (1987), may serve to provide the basis for a gestalt

approach to the assessment of effectiveness in educational organizations.

The Concept of Organizational Dynamics

Kotters' Theory of Organizational Dynamics

Kotter (1978), in addition to recognizing the multidimensional nature of organizations, provides a perspective on the dynamics involved in improving the effectiveness of organizations. He has pulled together the major elements of organizational theory (key organizational processes, the external environment, employees and other tangible assets, formal organizational arrangements, the internal social system, the organization's technology, and the dominant coalition) into a model which can be used to analyse short-run (up to a few months), moderate-run (a few months to several years), and long-term (decades) organizational dynamics (Kotter, 1978).

Kotter (1978) describes organizational dynamics as the interaction of organizational elements (p. 23). He further explains that organizational dynamics in the long-run are influenced by the system's driving force (or forces) and the adaptability of its structural elements (Kotter, 1978, p. 62). The system's dynamics in the short-run time period is a cause-and-effect relationship between the structural elements and the internal processes (Kotter, 1978, p. 34).

In the moderate-run time period, effectiveness is determined by the relationships among the six structural elements and their alignment or fit (Kotter, 1978, p. 37). The elements must be in highly adaptive states in order to achieve a state of coalignment such that the organization is effective.

The Dynamics of Coalignment

Researchers and scholars have continued to explore the question of what determines how organizations act in order to produce results within differing theoretical perspectives. Threading through the theories and linking them with a common theme is coalignment. Other terms for this concept include "fit", "congruence", "alignment", "match", and "contingency". Harrison (1987) defines coalignment as "the extent to which behavioral or organizational requirements and the constraints in one part of a system are compatible with those in other parts" (p. 75). It is possible to examine the "fit" between components of a particular element, as for example, the objectives and reward mechanisms of structure (Harrison, 1987, p. 75). It is also possible to examine fits between different system levels, for example, individual-group, individual-organization, or group-organization (Nadler & Tushman, 1980a, cited in Harrison, 1987, p. 75).

Harrison (1987) outlines a schematic summary of steps required to diagnose system fits (pp. 81-92). The first step involves choosing the levels, specific system elements or subcomponents to be examined. In the second step, Harrison (1987) suggests three ways to assess fits: examine the requirements, needs, or procedures of system parts, investigate feelings of participants and check to see whether conflicting expectations or pressures are the result of lack of fit, and see whether the system components fit together the way research-base models suggest they should. In the third step, he stresses that the organizational design should be diagnosed as conditions of the elements or the subcomponents of systems need to be compatible with the type of system (Harrison, 1987). In mechanistic systems, for example, the technology is routine, and the roles and responsibilities specialized and clearly defined. In organic systems, the technology is nonroutine and the roles and responsibilities are diffuse, flexible, and change through use (Harrison, 1987, p. 83). The fourth step deals with the importance of assessing system fits and lack of fits in terms of explicit effectiveness criteria.

Woodward (1965) and Thompson (1967) contributed to the theory that effectiveness in organizations rests in matching internal organizational characteristics to the kind of work done by the organization to achieve its goals. Woodward's (1965) research team studied specific features such as the

number of levels of authority, span of control, and amount of written communication in 100 South-East Essex manufacturing organizations and found differences. Why there were differences was not clear until differences in technology were studied. Woodward (1965) found that the objectives of the organization determined the kind of technology it used and the differences in technology accounted for many of the differences in organizational structure.

Thompson (1967) attributes the perpetuation and survival of complex organizations on the coalignment of technology and task environment with a viable domain, and of organizational design and structure appropriate to that domain (p. 147). He further explains that coalignment is not a simple combination of static elements but that each of the elements involved in the coalignment also has its own internal dynamics in addition to moving themselves (Thompson, 1967, p. 147).

According to Thompson (1967), coalignment is a basic administrative function. He says "administration is not something done by an administrator but instead is a process flowing through the actions of various members spanning and linking levels, and relating to the interactions of levels and components" (Thompson, 1967, p. 149). Such a perspective on the coalignment of administration and other variables in

the organization demands that administrators, to be effective, must be flexible.

Lawrence and Lorsch's (1967) "contingency theory of organization" conceptualized the organization's work as dealing with its external environment. They emphasized that appropriate organizational structure will depend upon environmental demands. Hence, the view taken by Lawrence and Lorsch (1967) is that the fit between structure and environment is dependent on appropriateness.

In an attempt to expand the contingency conceptual framework developed by Lawrence and Lorsch (1967) to include the contingent factor of individual differences among organizational members, Lorsch and Morse (1974) explored the match between particular organizational characteristics and the demands of the organization's work in relation to effect. They argued that these features are related and that the relationship may have an effect on the members' willingness to work toward organizational goals (Lawrence & Morse, 1974. p. 19)..

Lawrence and Morse's (1974) research sites included organizational units dealing with relatively certain environment and with short-term performance feedback and units with opposite characteristics such as high uncertainty and longer-term performance feedback. They found that when the

> [t]hree sets of variables - the external environment, the internal environment and members'

> personality dimensions - were congruent with each other, units in both kinds of external environments were successful and individuals were rewarded with feelings of competency (Lorsch and Morse, 1974, p. 112).

A critical issue facing many organizations is the motivation and productivity of its workers. The hypothesis formulated by Lawrence and Morse (1974) that a fit between man, technology, and organization can lead to greater productivity and individual well-being continues to be viable.

Summary

To understand adequately and predict the behavior of various elements within organizations over intervals of time, a knowledge of short-run, moderate-run, and long-run dynamics is desirable. System dynamics in a moderate-run time frame (around six months to six years) are influenced by the aligned and nonaligned relationships among the structural elements (Kotter, 1978). Assessing system fits between such elements as structure, environment, technology, or goals will yield diagnostic information to be used in improving effectiveness (Kotter, 1978; Harrison, 1987).

That congruence of the components of organizations leads to effectiveness has been expounded by a number of researchers. Woodward (1965) and Thompson (1967), for example, concluded that different technologies impose different constraints on individual members of organizations

and on the choice of organizational structure. That environmental demands and structure are related was the contingency theory of Lawrence and Lorsch (1967). Lawrence and Morse (1974), in addition to examining the fit between environment and structure, also considered how members of the organization fit with these elements.

The challenge facing researchers is to determine what is the appropriate fit between components of a system or organization. This appears to be a delicate balancing act for what may be appropriate for one organization may not be for another. However, as Harrison (1987) notes, conditions at the divisional or organizational level can contribute to group and individual problems such as low levels of satisfaction, poor work performance, and high turnover (p.74). Coalignment of elements and other specific features of organizations, then, cannot be ignored if effectiveness is the goal.

School Effectiveness Research

Introduction

Although the research on schools as effective organizations has often been criticized for methodological weaknesses (Averch et al., 1972; Rowan et al., 1983; Wood et al., 1984; Boyer, 1984), Corcoran and Wilson (1988) argue that the similarity in conclusions reached in dozens of

studies which have been conducted independently cannot be ignored (p. 20). Reviews of these studies have been provided by a number of scholars (Spady, 1973; Glasman & Biniaminov, 1981; Purkey & Smith, 1983; Cohen, 1983; MacPhail-Wilcox & King, 1986) all reaching similar conclusions regarding variables associated with effective schools: leadership, clear goals, an orderly school climate, high expectations and standards, and frequent monitoring and assessment of student progress. Leadership is recognized as a central variable within the school environment that affects other variables such as administrative structure, school climate, culture, curricular practices, and school programs.

Since effective schools are being attributed to the effective leadership of principals, the focus of many current studies is on what individual principals in the schools do to create the conditions for effectiveness. Highett (1989) researched the perceptions of parents, school principals, and superintendents in South Australia concerning effectiveness in junior primary and primary schools and found that "the principal was seen by parents as the hub of the school" (p. 142). Parents perceived that the principcpal was interested in students' work and involved in all school activities (Highett, 1989). Mortimore et al. (1989), who conducted an extensive study of effective junior schools within the Inner London Education Authority Board, identified purposeful leadership, where the head teacher

understood the needs of the school and was actively involved in the school's work without adopting an autocatric style, and involvement of the deputy head as two of the key factors playing a major role in schools which were categorized as effective (pp. 764-765).

Principal Behavior and Administrative Structure

Since the work of Peters and Waterman (1982), who spoke of successful companies as having simultaneous loose-tight properties, researchers in education are recognizing that similar qualities exist in successful schools (Clark, Lotto, & Astuto, 1984; Firestone & Wilson, 1985; Rosenholtz, 1985). Yin, Blank, and White (1984), for example, described schools as having "flexible organizational structures, but rigidly shared values dealing with quality, service, motivation, and experimentation" (p. 14).

Wilson and Firestone (1987) list the following five examples of bureaucratic linkages depicting the loose-tight qualities of control which they claim principals can use to influence instruction positively in the school:

1. Control organizational constraints on the amount of time students spend on academic tasks. Principals can protect classrooms from external interruptions and other activities to maximize instruction time.

2. Control class size and grouping, i.e. the mix of gender, race, and grouping.

3. Influence the working patterns of teachers by arranging physical space and free time to promote norms of collegiality and experimentation.

4. Judiciously disperse discretionary resources (money, released time, materials) to enhance innovative instructional activities.

5. Encourage teachers to seek new knowledge and facilitate that activity by recommending training sessions and providing resources for attendance (p. 20).

Which management approach nurtures effectiveness best is debated by researchers. Edmonds (1979) described the effective schools he identified as being more tightly managed than schools in general. For example, he found that curriculum instructional practices, and tests were more carefully aligned (Edmonds, 1979). In their study of successful secondary schools, Corcoran and Wilson (1988) also found that principals exercise control by aggressively monitoring the school's operation, insisting on careful articulation and management of the curriculum across subjects and grades, and being thoughtful and careful in their supervision of teaching staff (p. iv).

On the other hand, some researchers contend that looser controls contribute to more positive results. In his investigation of the relationship between organizational structure and teacher performance as measured by student achievement, MacKay (1964) discovered that where decision making was centralized and authority relations between teachers and administrators were highly visible, teacher satisfaction with the school was lower as was student achievement. Sackney (1976) found that high morale among

secondary teachers was related to high specialization and a low degree of centralization and standardization.

Firestone and Wilson (1986) set out to explore whether a machine bureaucratic or a professional bureaucratic approach in schools has a more positive impact on organizational outcomes as indicated by student achievement. The evidence clearly suggested that the professional bureaucratic approach explains increases in outcomes. They found that "principal support motivates teachers to do more and to teach equitably to all their students while centralization of control is counterproductive" (Firestone & Wilson, 1986, p. 20).

Corcoran and Wilson (1988) describe the consequences of the balancing act between control and discretion:

> To err on one side brings increased bureaucracy and reduced teacher effort and professionalism. To err on the other, risks fragmentation of program, isolation of teachers, and often alienated or lost students (p. 50)

This balancing of control and discretion is not easy to achieve but the administrators of the successful schools in Corcoran and Wilson's study (1988) were able to accomplish the task.

Principal Behavior and School Climate

Principal behavior has also been recognized as a key element in stimulating the development of a school climate conducive to learning. For example, Miskel (1977), who

employed the Situational Description Questionnaire (SDQ) to measure teachers' perceptions of the interpersonal climate in the school building, found that teachers' positive perceptions of their schools' interpersonal climate are related to positive perceptions of the principals' effective performance. Brookover et al. (1979) concluded that the principals' effective leadership facilitates a school climate that supports student achievement. The Project Rome research (Payne et al., 1975) also suggests that the principal is a key element in affecting staff morale in the school, which, in turn, influences the quality of classroom climate and the level of subsequent student outcomes. In their study of successful secondary schools, Corcoran and Wilson (1988) noted that recognition of teacher achievement, when combined with other conditions that make up a positive work climate, increases teachers' commitment to the school and their willingness to make an extra effort on behalf of their students (p. 55).

Findings in other investigations have been consistent with respect to the effect of a positive school climate cultivated by the principal. In the Dwyer et al. (1983) study, principals comfortably addressed climate and talked of ways to manipulate it. They further spoke of its importance for positive student outcomes (Dwyer et al., 1983, p. 64). Madaus, Airasian, and Kellaghan (1980) emphasized that a school climate characterized by social

rewards for academic excellence contributes to high student achievement (p. 189). Mortimore and Sammons (1987) confirmed that an effective school has a positive ethos and stated that "both around the school and classroom, results are more favorable when there is greater attention to praising and rewarding students" (p. 8). In their respective studies, Cohen (1981, cited in NEA, 1986), and Corcoran and Wilson (1988) also concluded that a school climate conducive to learning contributes to differences in effectiveness among schools.

In an Alberta study, Johnson (1988) examined principal effectiveness in elementary schools and found that

> [t]he school climate variable was not only regarded as the most effective dimension of the schools' work but was the best predictor and best correlate of the overall effectiveness variable (p. 302).

Highett (1989) also concluded that it was through the activities of the principal that a positive school climate developed. In his research study, parents noted that the principal can motivate teachers to grow both personally and professionally which results in a more effective education "of the kids" (Highett, 1989, p. 142).

There are many definitions for climate in organizations. Climate is a broad term that refers to the perceptions that various constituents (e.g. teachers or students in schools) may have of the general work environment of their organization. Hoy and Miskel (1987)

define climate as "the set of internal characteristics that distinguishes one school from another and influences the behavior of its members" (p. 225). Tagiuri (1968) preferred to talk about climate as the environment that is "interpreted by the members of the organization to have a certain quality to which they are sensitive to and which, in turn, affects their attitudes and motivation" (p. 27). The climate of an organization has also been described in terms of an open to closed continuum (Halpin & Croft, 1962), the health of an organization (Hoy & Miskel, 1987), and control over its members (Willower, Eidell, & Hoy, 1967). Open to closed are the terms used to explain the type of interaction among the members in the school. In an open climate the principal provides "a proper blend of structure and support as well as support and consideration" (Hoy & Miskel, 1987, p. 227). The teachers are cooperative and committed to their work. There is no need for close supervision or many rules. In schools characterized by a closed climate, the principal's ineffective leadership is evident in such actions as emphasis on rules and regulations, and lack of consideration for the staff. Teachers respond minimally to the work, appearing to go through the motions, and exhibit little satisfaction.

Organizational health refers to the extent that the organization is meeting "both its instrumental and expressive needs while simultaneously coping with disruptive

forces" (Hoy & Miskel, 1987, p. 262). Hoy and Miskel (1987) describe a healthy school as a place where the principal provides leadership that is both task-oriented and relationship-oriented, is supportive of teachers, emphasizes high standards of performance, has influence with superiors and exercises independent thought and action (p. 241). The teachers in a healthy schools are committed to teaching and learning, maintain high standards of performance, like and trust each other, and are enthusiastic about their work (Hoy & Miskel, 1987, p. 241). School climate, conceptualized in terms of control, is viewed from the custodial to the humanistic perspective, that is, according to the patterns used to manage its members (Willower, Eidell, & Hoy, 1967). The custodial school is conceived of as an autocratic organization which provides a rigid and highly controlled setting. The humanistic school, on the other hand, is conceived of as a democratic community in which students learn through cooperative interaction.

Viewed holistically, climate becomes the conditions of the workplace that may determine whether staff members stay or leave. Corcoran and Wilson (1988) revealed some factors that enabled the successful schools to attract talented teachers. These included the following: a sense of belonging, respect, a sense of autonomy and control over one's work, the opportunity for personal progress and growth, the physical conditions of the building, the ability

to influence others, and recognition and rewards (Corcoran & Wilson, 1986, cited in Miller, Smey-Richman, & Woods-Houston, 1987, pp. 21-22).

Another significant feature of the successful secondary schools was a proactive stance by the school to actively recruit community members to contribute to the school in a variety of ways. Help with special projects, acquiring funds for awards, and maintaining a two-way communication system are some ways that parents and other community members supported and interacted with the school. Hence, the welcome that community members feel appears to be another condition of a positive school climate. In addressing climate, therefore, issues related to people, relationships, goals, motivation, structures, and outcomes may surface.

Leadership and Other Specific School Attributes

In 1983 the United States Department of Education began to formally recognize successful public secondary schools for excellence in education. In the first three-year period 571 schools were recognized.

Corcoran and Wilson (1988) listed fourteen attributes of success drawn from the research on effective schools that were used as criteria of quality in the recognition program. These attributes were clear academic goals, high expectations for students, order and discipline, rewards and incentives for student, regular and frequent monitoring of

student progress, opportunities for meaningful student responsibility and participation, teacher efficacy, rewards and incentives for teachers, concentration on academic learning time, positive school climate, administrative leadership, well-articulated curriculum, evaluation for instructional improvement, and community support and involvement (pp. 21-24). As other studies did, their study clearly identified that it is administrative leadership which plays a vital role in successful schools:

> Leadership played a critical role in the schools selected for national recognition and the key actor was typically the principal. Parents, students, and teachers were unanimous in citing the principal as a major factor in their school's success (Corcoran & Wilson, 1988, p. 43).

Sweeny's (1982) list of six principal behaviors from his study of effective schools closely resembles that of Corcoran and Wilson (1988). His list includes emphasizing achievement, setting instructional strategies, providing an orderly atmosphere, evaluating student progress frequently, coordinating instructional programs, and supporting teachers (Sweeney, 1982, p. 349).

Russell et al. (1985), in depicting behaviors of effective secondary school principals by using a critical incident technique, listed 337 effective and ineffective behaviors. This wealth of information generated four general ways that principals promote school-wide measurement and recognition of academic success. As listed by Mazzerella (1985), these include the following:

1. Undertaking a unique or unusual efforts to recognize academic success.

2. Setting up ongoing systems to recognize academic success.

3. Encouraging the use of standardized testing.

4. Giving personal recognition to individual students for specific academic success (p. 6).

Thus it appears that administrative leadership is linked with other school attributes found in successful schools such as emphasis on student achievement; provision of rewards, incentives, and opportunities to engage student participation and recognize their achievements; and the coordination of the instructional progranm to ensure a well articulated curriculum.

Much of the research, however, reporting a positive relationship between principal leadership and student outcomes has been conducted at the elementary school level (Cotton & Savard, 1980; Leithwood & Montgomery, 1982; Hallinger & Murphy, 1985; Purkey & Smith, 1983; Mortimore & Sammons, 1987). Martinko, Yukl, and Marshall (1983, cited in Mazzerella, 1985) in an exhaustive search of the literature, found that few studies of principalship concentrated or even distinguished between secondary and elementary school principals. These scholars argue that such differentiation is necessary because the principalship at the two levels is very different (Martinko, Yukl, & Marshall, 1983, cited in Mazzerella, 1985, p. 2).

Other researchers also caution that differences between the two levels of schooling should be noted when interpreting research (Wilson, Firestone, & Herriott, 1985; Corcoran & Wilson, 1988). Corcoran and Wilson (1988) point out that individuals and activities are more loosely linked in secondary schools than in elementary schools and leadership tends to be dispersed (pp. 20-25). Teachers in secondary schools more frequently make independent decisions about how to manage their students, how to present material, and even about what to teach. A description of how the secondary principals' administrative activities may be different is provided by Mazzerella (1985):

> Secondary principals spend more time in interactions with administrative staff; in mutually initiated interactions; in activities related to staffing, decision making, and fiscal management; in management of relations with external entities; and in duties related to comptrolling than elementary principals do (pp. 2-3).

It seems desirable that the research on elementary and secondary schools be clearly distinguished. However, through the organization and coordination of a school's resources and instructional program, whether in elementary or secondary schools, evidence suggests that principals (or their designates) have an impact on student learning (Keeler, 1961; Hemphill et al., 1962; Gross & Herriott, 1965; Brandt, 1987; Corcoran & Wilson, 1988).

Emphasis on goals or vision often surfaces in the studies on effective schools. After summarizing the results

of several studies, for instance, Bossert et al.'s (1982) picture of what constitutes effective principal leadership includes goals and production emphasis, power and decision-making, organization/coordination, and human relations (1982, pp. 37-38). While most schools may have written goals, what seems to be different in the effective schools is that statements are taken seriously and are translated into day-to-day activities. Progress toward achieving the goals is constantly assessed as Corcoran and Wilson (1988) discovered. Input from multiple sources is used to refine and redefine goals (Corcoran & Wilson, 1988, p. 40).

In the successful schools, students are not the only ones recognized for their achievement. Teachers are too. Corcoran and Wilson's (1988) data revealed that teachers were recognized in a number of ways: praise and accolades from the administrators and colleagues, stipends for professional development, merit pay, promotions, and higher rank status such as team leader or curriculum coordinator. Such recognition gave them a sense of dignity and pride, and confidence in their work. Hence, recognition of teachers' accomplishments appears to be an attribute found in successsful schools.

Support for school activities is another attribute found in successful schools. Establishing links with the community is one way that school principals can garner support for school activities. Based on their findings of

what successful schools do, Corcoran and Wilson (1988) organized the school-community links into five areas: (1) human resources where parents and other community members are recruited as volunteers for such duties as clerical assistants or helpers for special projects, (2) public relations where parents and community members are used to maintain two-way communication, (3) financial resources where funds are acquired from the community for such purposes as awards, equipment, and special projects, (4) community service where students may participate in community activities and/or school facilities are made available for community meetings and social events. In these ways, the principals solicited community support to achieve effectiveness in their schools.

Summary

Effective organizations appear to be the product of effective leadership and the focus of many studies is on what individual leaders in the organizations do to create the conditions for effectiveness. For instance, studies of highly effective schools and their leaders are providing some evidence of the behaviors of principals that impact more directly on the instructional technology and on student achievement. Effective leaders demonstrate a commitment to academic goals, set standards of high expectations, monitor achievement, and create a positive learning climate. They

also provide the vision and direction for their schools through clearly articulated goals, promote teacher efficacy, and enlist community support.

It appears, though, that research studies concerning the relationship between leadership and other variables associated with effectiveness in schools need to more clearly distinguish between those studies conducted in elementary schools from those conducted in secondary schools as there may be some differences. Secondary schools, in comparison to elementary schools, tend to be physically big and have several administrative layers (e.g. principal, vice-principal, and department heads). Also parents may be less involved in school activities.

The manner in which principals approach the task of enhancing student achievement and other outcomes such as teacher performance and job satisfaction is also being investigated. Whether principals achieve effectiveness through aspects of structural organization is debated. One perspective maintains that tight controls will improve organizational performance. An alternate view promotes discretionary decentralization where principals would define core values and monitor decisions concerning these values but would delegate other decisions, especially those pertaining to the means in carrying out the work. Which approach is more desirable may depend upon the situation.

A useful and workable approach to understanding what determines organizational functioning is that of organizational climate. Organizational climate assessments have been used to examine the character of the workplace. Organizational climate as perceived by the type of interaction among the staff members, the state of health of the organization, the type of patterns used to control the members (custodial to humanistic) distinguishes one school from another. The school principal is seen as playing a major role in determining the type of climate that pervades the school. A positive school climate has been noted to exist in effective schools.

Summary

In spite of research efforts to define effectiveness in organizations, the construct of organizational effectiveness continues to be elusive. Researchers and practitioners have not come to a consensus on theoretical and methodological issues. Since practitioners need guidelines to foster excellence in their organizations, it is likely that researchers will continue to try to define organizational effectiveness and to research the conditions which lead to effectiveness in organizations.

Researchers' preference for criteria to be used to assess effectiveness depends on the perspective taken. Using

a goals perspective enables the researcher to determine effectiveness in terms of the degree to which an organization attains its goals. Multivariate criteria for measuring effectiveness are used within the systems or the multidimensional perspective. The performance of an organization may be measured by focussing on inputs, transformations or processes, and/or outputs and feedback in a systems perspective. Models which incorporate the multidimensional perspective address the attainment of goals, organizational processes concerned with the quantity or quality of the activities carried on by the organization, and the organization's interaction with its environment. Indicators of effectiveness may include adaptability, productivity, flexibility, and/or innovation.

The conceptual frameworks derived from a systems approach lend credence to the use of multiple indicators for judging effectiveness since the focus is on the total system and its interdependence with the environment. For example, several effectiveness indicators, such as student outcomes, job satisfaction, satisfaction with climate, control structures, and leadership, are associated with schools which are viewed as systems by some researchers.

The concept of organizational dynamics, illustrated in Kotters' (1978) model, is also discussed. Organizations as complex systems are taken to be in a state of dynamic interaction. Elements within an organization may interact

with one another in a cause-effect relationship or to create a condition of coalignment. The interaction may also be between the elements internal to the organization and the external environment, in which case the elements have to be able to adapt to changing conditions.

Leadership behavior continues to be a topic of interest in the literature on educational administration. Evidence in education research suggests that in order to have effective schools there must be effective leaders. Leadership requires clarification of goals, development of a plan of action through which the goals can be attained, assignment of particular responsibilities for each individual in carrying out the plan of action, and the engagement of each individual's commitment to the goals. The manner in which leaders, such as principals of schools, carry out these tasks appears to be crucial in achieving effectiveness. Therefore, the key to effectiveness in educational organizations may originate with the school leaders who effectively blend the variety of roles intrinsic to leadership.

CHAPTER THREE

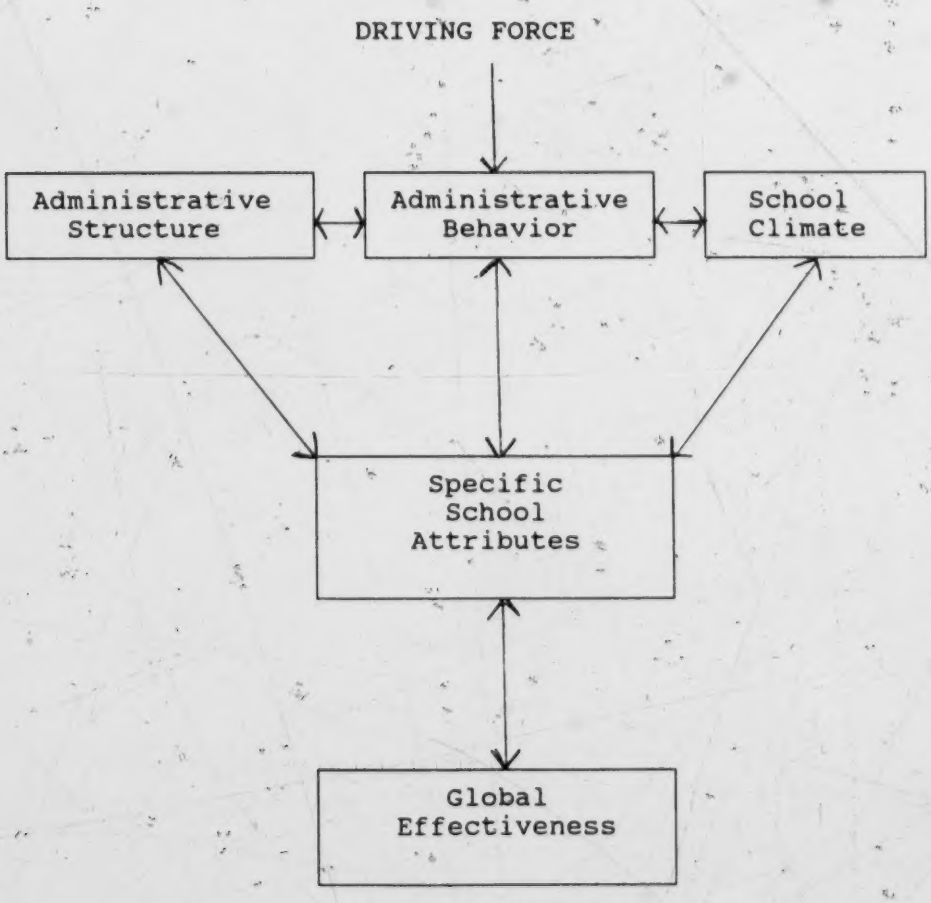
FRAMEWORK FOR STUDYING SCHOOL EFFECTIVENESS

For the purpose of this study, schools were viewed as complex organizations serving society by providing for the learning needs of children and young adults. Hence a multidimensional perspective was adopted for a study of school effectiveness. This chapter outlines the conceptual framework that guided the investigation, the roots of which can be found in the literature on organizational theory, organizational effectiveness, and school effectiveness.

The view was also taken that within effective organizations, schools included, the organizational elements are likely to be congruent or coaligned. So elements of the school organization, namely, administrative behavior, administrative structure, and school climate, were examined for differences and similarities in the way they fit together in more effective and less effective senior high schools. Specific school attributes, based on Corcoran and Wilson's (1988) study of successful secondary schools were also examined because they were considered to be integral to the school organization and important contributors to effectiveness. The model drawing together the variables important to school effectiveness is presented in Figure 3.1.

Figure 3.1

Model of the Dynamics of Selected Elements and Specific School Attributes in Effective Senior High Schools



Note. The construction of the model is based, in part, on Kotter's (1978) theory of organizational dynamics.

Schools were categorized as more effective or less effective on selected measures of global effectiveness: overall effectiveness, overall satisfaction, and school pride.

Implications of Organizational and School Effectiveness Literature for This Study

The work of Kotter (1978) on the dynamics of organizations provides a unifying theoretical perspective for the present study. Kotter (1978) drew his ideas from a broad range of concepts and findings in the field of organization theory and integrated these ideas into a model that can be used to guide organizational diagnosis and intervention. Hence, his model is multidimensional drawing together seven elements of organizational structure and process. These include key organizational processes, the external environment, employees and other tangible assets, formal organizational arrangements, the internal social system, the organization's technology, and the dominant coalition (Kotter, 1978, p. 9).

Another model capturing the multidimensional perspective, used in concert with Kotter's (1978) model for the current study, is Ratsoy's (1983) organizational effectiveness model and taxonomy of organizational effectiveness variables. Ratsoy (1983) points out that all

of the variables identified in the model are interactive in a living systems manner. He adds, further, that the model allows for a comprehensive approach to organizational assessment which can "provide school and district decision makers with information about the 'state of health' in the organization" (Ratsoy, 1983, p. 5).

Ratsoy's (1983) checklist of effectiveness indicators compares well with Kotter's (1978) list of organizational elements. For example, Kotter (1978) speaks of "personal characteristics" as being a variable of the "dominant coalition" element (p. 20). According to Ratsoy's (1983) checklist, "administrative behavior" is an indicator of the "personnel characteristics" category (1983, p. 5). Both scholars refer to structure, climate, and environmental variables as being important organizational variables. Their models provide a checklist of categories to examine and types of interaction to consider if effectiveness in organizations is to be maximized.

Ratsoy's (1983) model and associated checklist (Table 3.1) served as a guide for the selection of three organizational elements and one indicator of global school effectiveness for the present study. The organizational elements chosen include administrative behavior from the "personnel characteristics" category, and climate and structure from the "organizational variables" category.

Table 3.1

A Checklist of Organizational Effectiveness Categories and Indicators

Effectiveness Categories	Effectiveness Indicators
Goals	Official Operative
Other Outcomes	Satisfaction* Absenteeism Adaptability
Personnel Characteristics	Professionalism Attachment Knowledge Motives Administrative Behavior*
Organizational Variables	Technology Organizational Structure* Organizational Climate*
Environmental Variables	Boundary Spanning Interorganizational Linkages Environmental Turbulence Financial Support Student Inputs/Outputs

*Included in present study.

Note. From "Assessing effectiveness in educational organizations" by E.W. Ratsoy, 1983, *The Canadian Administrator*, XXIII (3), p. 5. Reprinted by permission.

"Satisfaction" from the "other outcomes" category was selected as an effectiveness indicator.

In Kotter's (1978) model of organizational dynamics, the relationships among elements play a key role in creating organizational dynamics. Depending on the time-frame employed, the dynamics could be cause-effect relationships between the structural elements and organizational processes, alignment or fit among the structural elements, or the level of adaptability of the structural elements. The coaligned state of the organizational elements indicates effectiveness in the organization within a moderate-run time frame, i.e. a few months to a few years, (Kotter, 1978, pp. 37-39). Kotter (1978) explains that when organizational elements fit together or are coaligned "one tends also to find efficient matter-energy processes, effective information processes, and stability within a moderate time-frame" (Kotter, 1978, p. 39). Examples of nonalignment resulting in inefficiency and instability include the following: the specialization called for in the technology may be inconsistent with employee skills, or the goals and strategies followed by the leaders may be based on incorrect assumptions about the external environment (Kotter, 1978, p. 40).

A similar concept of effectiveness in organizations is found in the work of other researchers such as Woodward

(1965) and Lawrence and Lorsch (1967). Bidwell and Kasarda (1975) summarize the work of these researchers as follows:

> Woodward (1965) and Lawrence and Lorsch (1967) have advanced the idea that there is an equilibrium point for any organization at which its structure somehow matches such attributes of products and markets as predictability and divisibility and such attributes of work processes as interdependence (p. 193)

According to Kotter (1978) any of the structural elements which are clearly more influential than the others can be a driving force in the organization in the moderate-run time frame (p. 53). He states: "whatever direction they move in, the other elements 'follow' in order to remain aligned" (Kotter, 1978, p. 50). For purposes of the current study, the administrators of the school, through the nature of their behavioral roles, were taken to be the initiators or "driving force" affecting the dynamics among the three sets of organizational elements: administrative behavior, administrative structure, school climate; and the specific school attributes (Figure 3.1).

Organizational Elements

Scott (1987) reminds us that each organizational element represents an important component of all organizations and cautions that "we will miss the essence of organization if we insist on focussing on any single feature to the exclusion of all others" (p. 20). The three

organizational elements examined in the present study are administrative behavior, administrative structure, and school climate.

Administrative Behavior

Using Kotter's (1978) terminology, the school administrators are considered to be the "dominant coalition". Kotter (1978) defines the "dominant coalition" as "that minimum group of cooperating employees who oversee the organization as a whole and control its basic policy making" (p. 20). In this study, the dominant coalition includes the school principal, the assistant or vice principal(s), and the department head(s). School administrators occupy the top position of power in the school. Hence, they have the potential for a larger overall impact in influencing the decision making and communication processes of the school.

Specifically, the administrative behavior examined was based on the ten managerial roles developed by Mintzberg (1973) as it was determined that these roles best described the work that school administrators do. In his study of managerial work, Mintzberg (1973) took the approach that no one really knew what managers did. He distinguished between describing what managers really do and prescribing what they ought to do. Mintzberg (1973) demonstrated that a manager's job is fragmented and consists of a wide variety of tasks

which cluster into three major categories (interpersonal, informational, and decisional) covering ten roles. The interpersonal roles of figurehead, leader, and liaison cover the relationships that a manager has with others. The set of informational roles: monitor, disseminator, and spokesman, describes the jobs managers have in collecting, transmitting, and disseminating information. Mintzberg (1973) regarded the most crucial managerial activity as that of decision making. The four roles in this category are entrepreneur, disturbance handler, resource allocator, and negotiator. Mintzberg (1973) stresses that the actual behaviors of managers are contingent upon the type of person one is, the situation in which one finds himself or herself, the kind of job being done, and the general environment of the job. Hence, under the constraints of these factors the manager chooses to exercise some roles rather than others. The nature of the activities in each of the role groups, together with the ten specific roles, are summarized in Table 3.2.

Items for the questionnaire used to collect information for each of the ten roles were developed by Ratsoy and Miklos (1984) for their study. These items were adapted for use in the present study of senior high schools. The general nature of the behaviors specific to school administrators for each of the ten roles are described on the pages following.

Table 3.2

Categories of Roles, Activities, and Specific Administrative Roles

Role Group	Activities	Specific Roles
Interpersonal	Relating to others both inside and outside the organization.	Figurehead Leader Liaison
Informational	Receiving and disseminating information.	Monitor Disseminator Spokesperson
Decisional	Making significant decisions and defining decision strategies for others.	Entrepreneur Disturbance Handler Resource Allocator Negotiator

Note. The table is constructed from descriptions provided in Mintzberg, 1973.

Figurehead. School administrators participate in parent/teacher meetings and social activities for members of staff, and are a visible presence within the school.

Leader. School administrators provide leadership on educational issues, emphasize high standards of performance, and assist staff members in finding solutions to problems.

Liaison. School administrators serve as points of contact between the community and the schools.

Monitor. School administrators monitor staff and student performance, and ensure curriculum articulation is practiced.

Disseminator. School administrators inform teachers of policy changes and inform parents of school activities.

Spokesperson. School administrators represent the views of the staff on educational issues to administrators in central office and to the community or the media.

Entrepreneur. School administrators take the initiative in proposing educational improvements and work toward improving the school.

Disturbance handler. School administrators establish a clear code of conduct, provide support for enforcement of discipline, and give high priority to unexpected problems.

Resource allocator. School administrators make effective decisions allocating financial and physical resources, provide resources to enable staff to complete their instructional tasks, and make their time available to staff members for consultation.

Negotiator. School administrators exercise diplomacy in relating to various groups, and manage decision making processes to the satisfaction of staff members.

Mintzberg's (1973) theory of what managers do "is based exclusively on the evidence from empirical studies of managerial work" (p. 4). Mintzberg (1973) asserts that "individual personality may affect how a role is performed but not that it is performed" (p. 55). The roles identified by Mintzberg (1973) are played by managers in every arena of work where leadership is essential, including schools.

In secondary schools leadership is often provided by a team (Corcoran & Wilson, 1988. pp. 46-47). In their study of effective secondary schools, Corcoran and Wilson (1988) observed that the school principal orchestrates the team's efforts into a harmonious whole that moves the school closer

to its goal (p. 47). Therefore, in the present study, the administrators (principal, vice/assistant principals, and/or department heads) within each school were treated as an administrator group rather than as individual administrators.

Administrative Structure

Many scholars and researchers view the structure of an organization as contributing to effectiveness of an organization (March & Simon, 1963; Steers, 1977; Burrell & Morgan, 1979; Van de Ven & Ferry, 1980; Scott, 1981; Peters & Waterman, 1982; Ratsoy, 1983). In this study, structure was viewed as the pattern of activities within the school organization which is designed to regulate the actions of the staff members. It can be compared to Kotter's (1978) "formal organizational arrangements" element which he defines as "all formal systems that have been explicitly designed to regulate the actions of an organization's employees (and machines)" (p. 15).

Any of the following variables are associated with the structure of an organization: formalization, specialization, centralization (decentralization), standardization, and differentiation (Hoy & Miskel, 1987, pp. 128-129). Two variables of the school's organizational structure selected for investigation were formalization and decentralization. Formalization, which "refers to the extent that work has

been standardized and the amount of leeway that is permitted from such standards" (Aiken & Hage, 1966, cited in Hoy et al., 1983, p. 111), was selected as it was judged to be indicative of the bureaucratic pattern within schools. Decentralization was selected as it is indicative of a professional pattern if teachers are given freedom to accomplish tasks and participate in setting goals and policies. Decentralization is defined as the "extent to which various types of power and authority are extended down through the organizational hierarchy" (Steers, 1977, p. 60). These two patterns were those identified by Hoy and Miskel (1987) in their summary of the research on the interrelationship of the bureaucratic characteristics of schools (pp. 122-123). Hoy and Miskel (1987), however, called these two distinct patterns of organization, bureaucratic and professional.

School Climate

Climate is a concept which has been refined over time and currently describes the organizational environment and its influence on the behavior of people in organizations (Steers, 1977; Hoy & Miskel, 1987). In the opinion of some researchers, analysing the climate of a school organization is useful if attaining effectiveness is a goal (Halpin & Croft, 1962; Likert & Likert, 1971; Kottkamp, Mulhern & Hoy, 1987). If the climate is not as favorable or as healthy as

it might be then measures to improve it can be considered. The knowledge that the climate is healthy can result in a positive self-image being exuded by that school which, in turn, affects the attitudes and motivation of its members. Organizational climate can be influenced by "the formal organization, informal organization, personalities of participants, and organizational leadership" (Hoy & Miskel, 1987, p. 225). Drawing on findings of other researchers as well as his own (e.g. Halpin & Croft, 1962; Likert, 1967; Campbell, Dunnette, Lawler, & Weick, 1970; Sergiovanni, 1966, 1968), Sergiovanni (1987) declares that "favorable school climates combined with quality leadership are essential keys to sustained school improvement and enhanced school effectiveness" (p. 262).

For the present study, school climate was derived from Kotter's (1978) element of "the internal social system" which he explains emerges "whenever people are brought together in sustained interaction" (p. 17). By using a similar framework of categories for items related to climate as that prepared by Ratsoy and Miklos (1985) for their study, climate variables of respect, trust, morale, opportunities for input, cohesiveness, commitment, opportunities for growth, and caring were studied.

Specific School Attributes

The Secondary School Recognition Program in the United States identified successful public secondary schools by collecting evidence on five outcome measures and information on 14 attributes of success derived from research on effective secondary schools (Corcoran & Wilson, 1988). Information on the 14 attributes was also collected in the present study by using the questionnaire developed for this purpose.

The attributes considered to be important to school success are described below. The descriptions are based on those provided by Corcoran and Wilson (1988, pp. 26-34).

Clear academic goals. In successful schools there are written goals which are communicated to parents, students, and teaching staff. There is also evidence of actions toward achieving the goals.

High expectations for students. Successful schools set expectations and standards for students to achieve that are above average. Indicators of these standards may consist of graduation requirements, reports on homework, student participation in academic competition, or enrollments in honors or advance placement classes.

Order and discipline. Orderly behavior of students is evident within the schools. Most discipline problems are resolved to the satisfaction of teaching staff and there are few suspensions.

Rewards and incentives for students. Successful schools are above average in their attention to rewards and incentives given to students for achievements in various categories such as academic, athletics, or good behavior.

Regular and frequent monitoring of student progress. Procedures for monitoring student progress are diligently followed. Evaluation procedures are used frequently to collect information on student progress.

Opportunities for meaningful student responsibility and participation. Higher than average student participation in extracurricular activities such as student government, sports, and community programs is noted in successful schools.

Teacher efficacy. Overall staff influence is higher than average. Teachers participate in planning and have more autonomy.

Rewards and incentives for teachers. An overall reward and incentive structure is in place to ensure that teachers are recognized for their achievements.

Concentration on academic learning time. Almost all classes begin on time and work to the end with few interruptions.

Positive school climate. Student attendance is high. There are few dropouts, and school spirit is positive.

Administrative leadership. Principals are highly involved in the instructional program.

Well articulated curriculum. Communication among teaching staff is above average with regards to the curriculum being taught. The prevalence of review procedures and interdepartmental cooperation ensures the articulation of curriculum among the grades and/or subjects.

Evaluation for instructional improvement. Successful schools have a testing program. Standardized test programs are used and test data is used diagnostically to improve instruction.

Community support and involvement. Parents and other members of the community participate in school activities.

Global Measures of Effectiveness

Kotter (1978) points out that it is important to involve the employees of an organization when diagnosing its effectiveness as employees may have a major effect on the processes of the organization and its future development (p. 14). He emphasizes that it is important to identify "not only their background and skills, but also their feelings about the organization, and their expectations about their future at work" (Kotter, 1978, p. 15). In the successful secondary schools identified in the United States, for example, school staffs had pride and confidence in their work.

In the current study, teachers were asked about the behaviors of the school administrators, the administrative structure of the school, their satisfaction concerning variables related to school climate, and the extent to which the specific school attributes were present within their schools as their perceptions were assumed to be valid. Their responses yielded data for the three global measures of school effectiveness: overall satisfaction, overall effectiveness, and school pride, selected to be used in categorizing the more effective and less effective schools.

Overall Effectiveness

Since the multidimensional perspective to assessing effectiveness is a multi-faceted phenomenon, overall effectiveness was considered to be an important global indicator of school effectiveness. In the present study, overall school effectiveness was viewed as the attainment of the school on each criteria by which success is judged, i.e. on the perceived implemention of each practice or condition that is associated with effectiveness. Hence, overall effectiveness is regarded as a composite of ratings on all criteria used in assessing effectiveness. Some examples follow of ways in which school effectiveness may be judged.

A high degree of involvement by parents and community members in school activities is one example of school effectiveness. Corcoran and Wilson (1988) identified at least five ways that schools can establish important links with the community: (1) instituting a volunteer program, (2) organizing a public relations campaign in which parents are used as promoters, communicators, and decision makers; (3) attracting financial resources from the community; (4) inviting themselves into the community, e.g. visiting local nursing homes, walk-a-thons; and (5) building an identity that consciously takes advantage of the community, e.g. a strong alumni association that motivates students and sustains local enthusiasm (pp. 69-72). Teachers in schools

involved in the present study had to judge whether this attribute was existent in their schools.

The presence of high expectations and recognition of student achievement in the schools is another way to judge effectiveness of schools. This was one the themes which evolved in the Corcoran and Wilson (1988) study on successful secondary schools in the United States. School staffs made academic expectations a priority in these schools, believed that students could achieve, communicated that belief, and created structures to reward positive behavior.

In successful secondary schools student discipline is likely to be above average (Corcoran & Wilson, 1988, p. 35). Since positive teacher-student relationships prevailed, opportunities were provided to enable teachers and students to meet both formally and informally to build positive relationships which contributed to the enhanced motivation of students and fewer disruptive behaviors (Corcoran & Wilson, 1988). Careful articulation and management of the school curriculum to exercise control is a strategy that Corcoran and Wilson (1988) had also identified as being used by principals in the successful schools.

Recognition of teacher efforts is further example of a practice instituted in successful schools. Corcoran and Wilson (1988) wrote that "recognition means being singled out personally as a contributor to the school" (p. 53).

Schools in the Secondary School Recognition Program used both formal and informal means of recognizing teachers who had contributed to making the school program successful and teachers valued such efforts. Recognition can be tangible and formal including such awards as merit pay, stipends for professional development, or promotions. It can also be informal and include praise from peers, administrators, parents, and/or students.

Corcoran and Wilson (1988) gave the practice of teacher recognition high praise when they said

> Recognition, when combined with the other conditions that make up a positive work climate, increases staff commitment to the institution and their willingness to make that extra effort on behalf of their students (p. 55).

Hence teacher recognition, in the present study, is considered to be an important attribute contributing to the overall effectiveness of the senior high schools.

Overall Satisfaction

Job satisfaction and effectiveness in schools has been the focus of several studies (Holdaway, 1978; Gunn, 1984; Johnson, 1988). Although there has been difficulty in establishing the contribution of effectiveness to performance, job satisfaction has the potential to enhance the lives of workers. Moreover, Corcoran and Wilson (1988) found that teachers in the successful schools were satisfied

"in being part of a group that has direction and elan" (p. 51). A sense of belonging, that is being part of a group that shares the same goals and values, and a sense of dignity that comes with being held with respect by one's colleagues were feelings expressed by the teachers who were on the teaching staffs of the successful schools. Therefore, teachers' overall satisfaction with the working conditions within the schools was deemed to be an important indicator of effectiveness of schools.

School Pride

School pride was not originally selected to be a global measure of effectiveness of schools for the present study. However, it emerged as a result of the factor analysis of the items in the Secondary School Effectiveness Survey and was used as an indicator of global effectiveness.

Corcoran and Wilson (1988) described the schools selected for recognition as being sources of pride to their students, their staffs, and to the excellence they represent verifying the importance of this indicator:

> Their pride reflects their deep commitment to their schools and to the excellence they represent. Whether it is based upon long traditions of success or upon recent accomplishments, it is the basis for building and maintaining a working consensus about the purposes of public education. From this clarity of purpose, all else follows (p. 72).

Thus, in the present study, the degree of pride that teachers and students had for their schools was also

considered to be an important measure of global effectiveness.

Summary

In this chapter the conceptual framework of the study was presented. Two models, Kotter's (1978) model of organizational dynamics and Ratsoy's (1983) taxonomy of organizational effectiveness variables, each taking multidimensional perspectives to the study of organizational effectiveness, served as a guide for the present study.

The organizational elements selected for analysis were administrative behavior, administrative structure, and school climate. Administrative behavior was researched using the three major categories and the ten specific roles outlined by Mintzberg (1973). Two dimensions of administrative structure, decentralization and formalization; the climate variables of respect, trust, morale, opportunities for input, cohesiveness, commitment, opportunities for growth, and caring; and 14 specific school attributes were also researched.

Indicators of effectiveness used to determine the more effective schools were overall satisfaction, overall effectiveness, and school pride.

Differences and similarities in the administrative behavior, administrative structure, school climate, and

specific school attributes between more effective and less effective senior high schools were examined. The way that the three organizational elements (administrative behavior, administrative structure, and school climate) and specific school attributes fit together in the more effective senior high schools was also examined. Coalignment or "best fit" among the elements in an organization is viewed in some of the current writings in organizational theory as one indication of organizational effectiveness.

CHAPTER FOUR

RESEARCH DESIGN, INSTRUMENTATION, AND METHODOLOGY

The nature of the study, the instruments used to collect data, and the procedures for data collection and analysis are described in this chapter under the major headings of research design, instrumentation, and research methodology. The first section discusses the overall plan for the research. Section two outlines the instrumentation used in the study while section three presents matters related to the collection and analysis of the data.

Research Design

Nature of the Study

This descriptive study of school effectiveness involved a survey research design. Questionnaires were used to collect data from a sample of schools in order to identify differences and similarities in administrative behavior, administrative structure, school climate, and specific school attributes. The sample consisted of 43 senior high schools. The unit of analysis was the school.

Survey research is "a procedure for systematically and comprehensively collecting information about the attitudes, beliefs, and behavior of people" (Williamson, Karp,

& Dalphin, 1977, p. 156). Therefore, this methodological approach was judged to be suitable for this study. Responses to items in the questionnaire used to collect the data were sought from teachers in the participating senior high schools.

One major strength of survey research is "its ability to generalize from a relatively small sample to a much larger population of interest" (Williamson, Karp, & Dalphin, 1977, p. 156). In this study, reliance upon a relatively large randomly selected sample suggests that the findings from the sample may be generalized to the total population of senior high schools in the province of Alberta.

The Sample

A stratified random sample of 60 Alberta senior high schools was selected from the population of 113 schools designated as public high schools. The sample included the high schools designated as such from both the public and separate school jurisdictions in the province. No private high schools were included.

Forty three senior high schools participated in the study, a 71% participation rate. This represented 38% of the total of such schools in Alberta. Eleven schools initially contacted opted not to participate and there was no response from six other schools which had initially agreed to participate. Of the 43 schools, approximately one third were

located in rural areas, one third in small urban areas, and the remaining third in large urban areas.

The selected senior high schools had no fewer than 20 teachers on staff and had students enrolled primarily in grades 10 to 12. Fourteen of the 43 schools also had students enrolled in grade 9 and three of the 14 had grade 7 and 8 students as well.

Principal tenure at individual schools was not considered relevant as a factor in selecting the schools for two reasons: (1) Effectiveness for purposes of this study is viewed in a moderate-run time frame, i.e., a few months to a few years, as based on Kotter's (1978) theory of organizational dynamics. (2) The finding from Corcoran and Wilson's (1988) study of 571 effective secondary schools that success of the schools is not related to the length of principals' years of service was taken into account.

Selecting Questionnaire Respondents

Twenty teachers were randomly selected in each school and invited to respond to the questionnaire. In four of the schools, however, there were only 20 teachers on staff so all were invited to participate. Scores were aggregated within a school to produce a composite measure for each school on each variable.

Guidelines for the Research Design

The research guidelines outlined by Cameron and Whetten (1983) were followed to address some of the major criticisms that are often levelled at organizational effectiveness studies. These guidelines include the following: referents against which effectiveness is judged, type of data being used for judgments of effectiveness, time frame being employed, purpose for judging effectiveness, level of analyses being used, perspective from which effectiveness is being judged, and domain of activity being assessed.

In this study, the performance of different schools was compared against the same set of indicators, i.e. overall effectiveness, overall satisfaction, and school pride. According to Cameron and Whetten (1983) use of a standard set of references against which effectiveness can be judged establishes a more uniform procedure for assessing organizational effectiveness.

The time perspective for the study was selected and specified. Data were collected which reflected a moderate-run time frame (a few months to a few years) as outlined in the conceptual model.

The standard used in judging the effectiveness of these senior high schools was the entire sample mean score computed from the ratings given for each global measure of effectiveness: overall effectiveness, overall satisfaction, and school pride. The purpose for the standard was to

provide a basis for categorizing the more effective and less effective senior high schools. This purpose then determined the level of analysis which was the individual school.

The organizational level of analysis then determined the constituents to be involved, as "effectiveness must be defined and assessed from someone's viewpoint" (Cameron & Whetten, 1983, p. 270). Constituents are individuals who have a stake in the organization. For this study, teachers were selected. A conclusion presented in the Research Action Brief (1980), which reports the findings of significant empirical studies, is that teachers make the best evaluators of principal behaviors (p. 3). Andrews, whose research focussed on teachers' perceptions of the leadership of their principals, goes so far as to say in an interview with Brandt (1987) that gains and losses in students' test scores are directly related to teachers' perceptions of their principal's leadership (p. 9).

Cameron and Whetten (1983) emphasized that it is important also to identify the domains of activity being assessed in order to avoid confusing or contradicting research results. In the current investigation the behaviors of the school administrators, the type of administrative structure in the school, the kind of climate perceived to be existent in the schools by the teachers, and the practices or conditions (specific attributes) characteristic of effective schools were assessed.

There is no single approach to assess effectiveness in organizations but using Cameron and Whetten's (1983) guidelines provides a method for ensuring that similar concerns are addressed in all assessments of organizational effectiveness. In the present study, their guidelines were utilized.

Instrumentation

In keeping with the nature of this study, questionnaires were used to collect data. Lawler et al. (1980), suggest that the questionnaire is appropriate for use in organizational effectiveness studies since "a single questionnaire can be used to obtain a large amount of data from an individual, covering a whole range of topics and issues" (p. 332).

Research Instrument: Inventory of School Operations

Preparation for the study included pilot testing of the instrument, "Inventory of School Operations (ISO)", which was conducted in June, 1988. The ISO is a questionnaire adapted for use in schools from a questionnaire entitled, "Inventory of School District Operations (ISDO)".

ISDO was developed by Ratsoy and Miklos (1984) under the sponsorship of the Alberta Department of Education to collect information about the performance of school

districts. The descriptive, analytical categories (administrative goals, internal operations, administrative behavior, organizational structure, and environmental change) were designed to serve diagnostic and formative purposes. The data obtained were intended to assist district personnel in their efforts to increase the effectiveness of school districts.

The ISDO instrument was adapted and this adapted form evaluated to establish its suitability for collecting information about the performance of schools in the present research study. The evaluation plan consisted of two components: (1) evaluation of ISDO and; (2) evaluation of the adapted instrument, ISO.

A product evaluation method was utilized in evaluating the ISDO, involving the techniques of a checklist and an analysis procedure. The ISDO was adapted in the following ways for the pilot test: (a) Items were revised, deleted, or added to make the questionnaire relevant to schools. (b) Items were reordered as necessary. (c) Parts of the inventory were also reordered and, in some cases, renamed. For example, the "internal characteristics" category became "school climate". (d) Each page was designed so that respondents could indicate whether each item was clear and relevant to the category intended. (e) A new part was included so that respondents could provide an overall evaluation of the adapted instrument.

A review of the literature also established the validity of the categories (administrative goals, administrative behavior, organizational climate, organizational structure, and adaptation to environmental change) to be included in the questionnaire to assess the effectiveness of schools. After the pilot study, the categories of "administrative goals" and "adaptation to environmental change" were deleted from the questionnaire as it was decided that these categories would not be the focus of this study.

The adapted instrument, ISO, was evaluated through survey research. Hence, the ISO was pilot tested in three secondary schools in June, 1988. School administrators and classroom teachers participated in the pilot study. To establish content validity the respondents were asked to judge each item to determine whether it was clearly worded and also whether it belonged in the category in which it was placed. To establish construct validity, the respondents were also asked to rate each item and the data were subjected to varimax factor analysis in order to confirm whether the items tended to cluster in the established categories. The results of the pilot study revealed that the items were, in general, understood by the respondents, and that most of them belonged in the predetermined categories. However, the wording of some items was modified as a result

of the feedback provided and the findings of the factor analysis.

In addition, the respondents provided an overall evaluation of the content and format of the inventory. Most respondents felt that the length was appropriate, the directions were clear, and the headings/titles were specific.

The descriptive and statistical data obtained assisted in establishing the content and construct validity, and internal reliability of the instrument. The statistical measures used included the following:

1. Central tendency and variability measures provided the means and standard deviations for each item.

2. The t-test detected that differences in the independent means could be obtained for the items.

3. The factor analysis confirmed that the items in each part tended to cluster in the established categories.

4. The Gutman split-half analysis using an odd-even split of items resulted in the following correlation coefficients for the three parts of the pilot study questionnaire: Administrative Behavior .97, School Climate .97; and Administrative Structure .90. These results attested to the internal reliability of the study instrument.

With some modifications, the ISO instrument was used with a degree of confidence to collect data in schools on

selected organizational elements associated with effectiveness. Based on the results of the pilot study, therefore, the final form of the study questionnaire (ISO) was comprised of three parts: administrative behavior, administrative structure, and school climate. Likert-type items were used in measuring the respondents' perceptions to various aspects related to each of the three parts.

Part A. Administrative behavior. The administrative behavior section of the questionnaire consisted of a total of 26 items. The focus of the first nine items was on the interspersonal role behaviors, the next seven items on the informational role behaviors, and the last 10 items on the decisional role behaviors.

Part B. Administrative structure. The administrative structure section of the questionnaire consisted of a total of 10 items. The focus of the first five items was on the formalization dimension of administrative structure while the focus of the last five items was on the decentralization dimension.

Part C. School climate. The school climate section of the questionnaire consisted of 20 items which asked teachers to respond to questions dealing with the following climate variables: respect, trust, morale, opportunities for input,

cohesiveness, commitment, opportunites for growth, and caring. The last item, number 21, was a general question. This question asked teachers about their degree of overall satisfaction with the working conditions in the school.

Secondary School Effectiveness Survey

Additionally, an instrument to collect information on the 14 attributes associated with effectiveness in schools that were delineated in the Secondary School Recognition Program (Corcoran & Wilson, 1988) was developed by the researcher. This instrument constituted the fourth part of the questionnaire (Part D).

Thirteen questions were developed, one on each of the following attributes: clear academic goals, high expectations for students, order and discipline, rewards and incentives for students, regular and frequent monitoring of student progress, opportunities for meaningful student responsibility and participation, teacher efficacy, rewards and incentives for teachers, concentration on academic learning time, positive school climate, administrative leadership, well-articulated curriculum, and community support and involvement (Corcoran & Wilson, 1988, pp. 26-34).

For the questionnaire used in the current study, the attributes, "evaluation for instructional improvement" and "regular and frequent monitoring of student progress", were

considered to be similar enough to be combined to form one question, number five, thus resulting in 13 items. The fourteenth item in the questionnaire addressed teachers' perceptions of the overall effectiveness of their schools.

The questions were reviewed by the advisory committee. To establish content validity, the committee judged each question to determine whether it was representative of the attribute for which information was sought. The questionnaire was also pilot tested by a group of teachers and administrators enrolled in a graduate administration course at the University of Alberta. They, too, were asked to determine whether each question was relevant and representative of the category intended. Based on data from these two sources, some questions were slightly modified for clarity. The Secondary School Effectiveness Survey was used with a degree of confidence to collect data on specific attributes of school effectiveness.

Reliability of Inventory of School Operations

The reliability of the ISO instrument to collect consistent, dependable, and predictable data in the schools under study was verified. The Cronbach Alpha and a Guttman Split-half (odd/even split) tests were performed to assess the internal reliability of each part of the questionnaire.

Reliability coefficients for the parts of the questionnaire are outlined in Table 4.1. This table shows

that all parts were highly reliable based on the criterion that a reliability coefficient of .80 or greater has been deemed acceptable in most research studies. Borg and Gall (1983) state that

> Reliability coefficients vary between values of .00 and 1.00, with 1.0 indicating perfect reliability.... The more closely a reliability coefficient is to the value of 1.00, the more the test is free of error variance and is a measure of the true differences among persons in the dimensions assessed by the test (p. 283).

Table 4.1

Questionnaire Reliability Coefficients

Instrument	Section	Alpha	Split-half
Inventory of School Operations	A	0.95	0.97
	B	0.88	0.93
	C	0.95	0.95
Secondary School Effectiveness Survey	D	0.90	0.91

Research Methodology

Data Collection

Data collection involved the distribution and return of questionnaires from the randomly selected teachers in the schools included in the sample. First, permission to conduct

the survey in the various school jurisdictions throughout the province was sought from each jurisdiction's superintendent. Upon receiving permission from the superintendents, principals of the randomly selected schools were approached for permission to conduct the research in their schools. In both instances, confidentiality of participants and anonymity of the participating schools was assured.

The questionnaires were sent to the schools in late January, 1989. Each questionnaire, together with a self-addressed envelope, was sealed, and addressed to the individual randomly selected teacher. To further maintain confidentiality all questionnaires to a given school were put in one larger envelope and sent to the school secretary for distribution to the teachers.

Teachers were asked to rate items for each of the indicators in the questionnaire on a seven-point scale ranging from very low to very high and return the questionnaires by the end of February, 1989. Approximately 55% of the questionnaires were returned by this date. The principals of the participating high schools were phoned and asked to remind their staffs to complete the questionnaires. The phone call was followed up by a letter to the principals. The reminder yielded a further 12.25% return of questionnaires for a total return rate of 67.25%. Questionnaire returns were accepted to the end of March.

The criterion measures for the organizational elements and specific school attributes for which data were collected are given in Table 4.2.

Table 4.2

Criterion Measures for the Organizational Elements and Specific School Attributes

Organizational Elements and Specific School Attributes	Criterion Measures
Administrative Behavior	Frequency of behavior or action.
Administrative Structure	Degree of formalization and centralization.
School Climate	Degree of staff satisfaction.
Specific School Attributes	Extent to which practice or condition is characteristic of the school.

Data Analysis

Questionnaire data were analysed by various quantitative means. Statistical techniques included varimax factor analysis, mean scores and rankings, Pearson

correlation coefficients, t-tests, and stepwise regression analysis. All reported data were truncated at the tens place value.

Factor analysis. Varimax factor analysis was performed on each of the four parts of the questionnaire (administrative behavior, administrative structure, school climate, and secondary school effectiveness survey) to see whether the number of variables in each of the parts could be reduced to a fewer number and to confirm whether the items were valid for scales. Borg and Gall (1983) state that

> Factor analysis is helpful to the researcher because it provides an empirical basis for reducing the many variables to a few variables. The factors then become manageable for analysis and interpretation. Factor analysis performs the functions of data reduction by grouping variables that are moderately or highly correlated with one another (p. 613).

The factor solutions for each part of the questionnaire were examined and the highest factor loadings used to determine which items belonged in a given scale. The minimum acceptable factor loading was set a priori as 4.0. Items were moved where they fitted according to the highest factor loadings, but only after careful consideration of whether the items would also fit conceptually with the factor solution. No such adjustment was made for the section on administrative structure. The results of the factor analysis are discussed in the next chapter, chapter five.

The scores for the various scales identified by the factor analysis were subjected to a number of statistical techniques.

Means. The mean scores and standard deviations for each variable were computed for every school, for the entire sample of schools, and for the more effective and less effective groups of schools (Tables 5.8 and 6.1). The computed mean scores on a seven-point rating scale, where one represented the lowest rating, were generally high. Teachers tended to use the ratings of medium, moderately high, or high to rate the items in the questionnaire.

t-Test. The t-test was used to determine whether the differences in the mean scores obtained for the two school groups, more effective and less effective, were statistically significant (Tables 6.2, 6.3, 6.4, 6.5). The level of acceptance for statistically significant difference in means was set a priori at the .05 level.

Correlation coefficients. Pearson correlation coefficients were computed to quantify the degree of association between any two of the variables important to the study. Mean scores on the variables were aggregated at the school level for the correlation matrix (Appendix A). Examination of the correlation coefficients allows for

comparison of the direction and strength of association between the different pairs of variables.

Regression analysis. Multiple regression analysis (stepwise) was employed to disclose factors that best predict the overall satisfaction of teachers with school climate, overall school effectiveness, and school pride (Tables 6.6, 6.7, and 6.8).

Categorization of Schools

To answer the research questions it was necesary to identify those among the 43 senior high schools that were more effective and those that were less effective.

Teachers' perceptions of their school's effectiveness was assumed to be a valid indicator of overall school effectiveness. Therefore, three items in the questionnaire (number 21 of the School Climate section, and numbers 10 and 14 of the Secondary School Effectiveness Survey) provided the global effectiveness measures of overall effectiveness, overall satisfaction, and school pride which served to categorize the two groups of schools. The procedure for categorizing schools into the two groups of more effective and less effective is outlined in the next chapter.

Presentation of the Findings

The findings of this study are presented in the next two chapters. Chapter five, presents the results of the factor analysis, the categorization of schools into more effective and less effective groups, and a description of the schools involved in the investigation. The findings related to the five research questions are presented in chapter six.

CHAPTER FIVE

FACTORS, EFFECTIVENESS INDICATORS, AND SCHOOL CHARACTERISTICS

There are three sections to this chapter. The results of the varimax factor analysis used on the items in each section of the questionnaire, Inventory of School Operations -- Part A: Administrative Behavior, Part B: Administrative Structure, Part C: School Climate, and Part D: Secondary School Effectiveness Survey -- are discussed in the first section of this chapter. The second section contains descriptions of the global effectiveness measures and how they were used as indicators of school effectiveness. The third section describes the characteristics of the 43 senior high schools involved in the current study.

Part A. Administrative Behavior

The items in the Part A of the questionnaire on administrative behavior were subjected to varimax factor analysis to ensure that items could be treated as scales and possibly to reduce the number of variables. Three, four, and five statistical factor solutions were performed for the 26 items. The solutions were not interpretable from the conceptual perspective as scales as they appeared to contain

items which were not compatible according to Mintzberg's (1973) categories of administrative behaviors.

A second factor solution was, therefore, performed on each of the three categories of administrative behavior derived from Mintzberg's (1973) theory. The results obtained from this analysis confirmed that the items were generally appropriate indicators of the behavior for which they were designed. Hence Mintzberg's (1973) three categories and ten administrative behavior roles for administrative behavior were retained as labels for the ten factors yielded by the factor analysis.

Two guidelines were followed in determining which items belonged in a given scale in this part of the questionnaire:
(a) the highest numerical factor loading, and
(b) consideration of whether the items fit conceptually with the factor solution. These guidelines were also followed for the items in the "Administrative Behavior" and the "School Climate" sections of the questionnaire.

Interpersonal Role Factors

The three factor solution for the interpersonal category yielded the factors leader, liaison, and figurehead which describe behaviors that are of an interpersonal nature where administrators relate to others both within and outside the school (Table 5.1).

Table 5.1

Rotated Varimax Three Factor Solution for Nine Interpersonal Role Administrative Behavior Items

Items Grouped According to Factors	Factor Loadings F1	F2	F3
Leader (F1)			
6. School administrators emphasize high standards of performance for staff.	.80	.25	.01
5. School administrators emphasize high standards of performance for students.	.79	.21	.18
7. School administrators assist staff members in finding solutions to problems.	.61	.26	.39
4. School administrators establish school-wide goals and programs through staff input and participation.	.58	.17	.49
Liaison (F2)			
8. School administrators serve as links between the school and the community	.36	.74	.05
9. School administrators are readily accessible to parents and other members of the public.	.40	.68	.18
3. School administrators attend the school meetings to which parents are invited.	-.01	.66	.44
Figurehead (F3)			
1. School administrators are present at social activities for members of staff.	.14	.23	.82
2. School administrators are highly visible within the school to students and staff.	.55	.09	.56

Leader. The cluster of items from the questionnaire for the first factor focussed on the school administrators' role in showing leadership regarding high standards of performance for staff and students (numbers 6 and 5), on finding solutions to problems (number 7), and on establishing school-wide goals (number 4). The last item, item 4, also loaded on the third factor, figurehead.

Liaison. The focus of the items clustering to yield the second factor, liasion, was the ability of the administrators to establish links with the school and the community (numbers 8, 9, and 3). Item number 9, however, also loaded on the first factor, leader; while item 3 loaded on the third factor, figurehead. Item 9 asked whether school administrators were readily accessible to the public and item 3 specifically asked whether school administrators attended school meetings to which parents were invited.

Figurehead. The third factor identifed for the interpersonal role was figurehead. The items for this factor (numbers 1 and 2) were concerned with school administrators being highly visible within the school and at social functions. One of the items, item 2, also loaded highly on the first factor, leader.

Informational Role Factors

The three factor solution for the informational category yielded the factors, monitor, spokesperson, and disseminator, which describe behaviors concerned with receiving and disseminating information (Table 5.2).

Monitor. The first factor identified, monitor, consists of three items: numbers 11, 12, and 10, in that order. Number 11 focussed on the school administrators' monitoring of student performance, number 12 on their monitoring of the school program, specifically the articulation of courses across grade levels, and number 10 on their monitoring of teacher performance.

Spokesperson. The items clustering for the second factor in the informational role category were numbers 15 and 16. The focus of the items was on the school administrators effectively representing the views of school staff to central office and the community or media.

Disseminator. Two items, numbers 14 and 13, clustered to yield the third factor, disseminator. These items dealt with the school administrators' role in informing staff members about school activities and policy changes. Item 13 also loaded highly on the second factor, spokesperson. The specific focus of this item was on school administrators' task of informing staff members about proposed policy changes.

Table 5.2

Rotated Varimax Three Factor Solution for Seven Informational Role Administrative Behavior Items

Items Grouped According to Factors	Factor Loadings F1	F2	F3
Monitor (F1)			
11. School administrators develop procedures for monitoring student performance.	.85	.22	.13
12. School administrators ensure that courses are articulated across grade levels.	.75	.25	.28
10. School administrators monitor the performance of staff members and provide feedback to them.	.74	.26	.17
Spokesperson (F2)			
15. When attending to educational issues with central office, school administrators represent the views of the school staff.	.27	.87	.21
16. School administrators represent the views of the school staff in relating to the community or the media.	.29	.86	.15
Disseminator (F3)			
14. School administrators inform parents about school activities.	.20	.16	.91
13. School administrators inform staff members about proposed policy changes.	.33	.51	.55

Decisional Role Factors

The four factor solution for the informational category yielded the following factors: disturbance handler, negotiator, entrepreneur, and resource allocator. These factors are descriptive of tasks for which school administrators are expected to make significant decisions or define decision strategies for others (Table 5.3).

Disturbance handler. Three items from the questionaire clustered to yield the factor, disturbance handler (numbers 19, 20, and 21). Number 19 focusses on the school administrators' role in establishing a clear code of conduct regarding rules and regulations, number 20 on their providing support for enforcement of discipline, and number 21 on their responding to unexpected developments and/or problems with a plan for action. Number 21 also loaded on the second factor, negotiator.

Negotiator. Three items clustered to yield the factor, negotiator (numbers 25, 26, and 24). The first item in the cluster deals with school administrators' ability to exercise diplomacy in relating to various organizations and interest groups. The second, number 26, asks whether school administrators manage the decision making processes to the satisfaction of staff members and the third, number 24, asks whether school administrators make their time available for consultation with staff members.

Table 5.3

Rotated Varimax Four Factor Solution for Ten Decisional Role Administrative Behavior Items

Items Grouped According to Factors	Factor Loadings			
	F1	F2	F3	F4
Disturbance Handler (F1)				
19. School administrators establish a clear code of conduct regarding rules and regulations.	.85	.04	.21	.16
20. School administrators provide support for enforcement of discipline procedures.	.82	.29	.14	.18
21. School administrators respond to unexpected developments and/or problems with a plan for action.	.60	.42	.37	.25
Negotiator (F2)				
25. School administrators exercise diplomacy in relating to various organizations and interest groups.	.10	.87	.15	.22
26. School administrators manage decision making processes to the satisfaction of staff members.	.37	.60	.33	.31
24. School administrators make their time available to staff members for consultation.	.29	.58	.26	.38
Entrepreneur (F3)				
17. School administrators take the initiative in proposing educational change.	.17	.17	.88	.20
18. School administrators devise creative ways to improve the school.	.32	.28	.75	.24

continued . . .

TABLE 5.3 (continued)

Items Grouped According to Factors	Factor Loadings			
	F1	F2	F3	F4
Resource Allocator (F4)				
23. School administrators provide resources to enable staff to complete instructional tasks.	.16	.28	.17	.83
22. School administrators make effective decisions in allocating the school financial and physical resources.	.25	.26	.27	.76

Entrepreneur. The two items yielding the factor, entrepreneur, were numbers 17 and 18. They dealt with school administrators taking the initiative to propose educational change and devising creative ways to improve their school.

Resource allocator. Two items clustered for the factor, resource allocator (numbers 23 and 22). The focus of this cluster was on the ability of school administrators to make effective decisions regarding the provision of resources so that instructional tasks are completed.

Part B. Administrative Structure

The 10 items in Part B of the questionnaire on Administrative Structure were subjected to factor analysis involving two, three, and four factor solutions. The two factor solution was readily interpretable. As outlined in Table 5.4, the factors were labelled formalization and decentralization. These factors were consistent with the original design of the items in the questionnaire.

Formalization

Five items clustered to yield the factor, formalization. The five items, numbers 1, 2, 3, 4, and 5, refer to the extent to which the operation of the school is formalized. Items 1 and 2 ask specifically about policies

Table 5.4

Rotated Varimax Two Factor Solution for Ten Administrative Structure Items

Items Grouped According to Factors	Factor Loadings F1	F2
Formalization (F1)		
2. Policies and procedures for the operation of the school are formalized.	.86	.08
3. Explicit role definitions exist for each position in the administrative structure.	.81	.19
1. School administrators use a manual of policies and procedural guidelines.	.80	.14
4. Authority relationships and channels of communication are clearly defined.	.79	.28
5. Responsibilities for policy making and policy implementation are clearly designated.	.73	.36
Decentralization (F2)		
9. Staff members have significant input into school policy decisions.	.11	.86
10. Staff members are encouraged to take the initiative in engaging in leadership-type activities.	.19	.79
8. Task forces and committees are used in carrying out selected administrative functions.	.17	.79
7. Operational decisions are decentralized to department heads (or other units) in the school.	.18	.71
6. Roles of school administrators are defined mainly in terms of providing support for teaching and learning.	.41	.63

and procedures regarding work activities. The second item in the cluster, number 3, focussed on the existence of explicit role definitions for each position in the administrative structure, item 4 on clearly defined channels of communication being present, and item 5 on the responsibilities for policy making and implementation being clearly designated.

Decentralization

Five items also clustered to yield the factor, decentralization. The items for this factor are concerned with the extent to which various types of authority and decision making are extended by the administrators to other members of the staff.

The first item in the cluster, number 9, asked whether staff members have significant input into school policy decisions. The next item, number 10, asked whether staff members are encouraged to take initiative in engaging in leadership-type activities. The third item, number 8, was concerned about task forces and committees being used to carry out selected administrative duties, while item 7 was concerned about operational decisions being decentralized to other units within the school. The last item, number 6, centered on the school administrators' roles being defined mainly in terms of providing support for teaching and

learning. It loaded on the first factor, formalization, as well.

Part C. School Climate

Twenty of the 21 items in Part C of the questionnaire on School Climate were subjected to varimax factor analysis. Various factor solutions were attempted from a two factor solution through to a solution resulting in eight factors. Most solutions were difficult to interpret using the original conceptual basis for this scale. The three factor solution was adopted as the one most interpretable conceptually as well as statistically. As outlined in Table 5.5, these factors were labelled (a) empowerment, (b) cohesiveness, and (c) commitment.

Empowerment

The focus of the first factor, empowerment, was on the positive relationships between school administrators and staff. Seven items clustered to yield this factor. Specifically, the relationships were based on the degree to which teachers perceived staff members to be involved in decision making (number 10), the level of trust and cooperation established between the administrators and staff (numbers 5 and 2), encouragement given to staff to take initiative in being creative (number 6), staff expressing

Table 5.5

Rotated Varimax Three Factor Solution for Twenty School Climate Items

Items Grouped According to Factors	Factor Loadings F1	F2	F3
Empowerment (F1)			
10. The extent to which ideas of staff members have an impact on decisions regarding program or policy.	.82	.17	.15
5. The degree of trust between members of staff and administrators.	.80	.30	.19
2. The level of cooperation between members of staff and administrators.	.77	.34	.10
6. The extent to which members of staff are encouraged to be creative in carrying out their responsibilities.	.77	.22	.23
8. The extent to which members of staff express a positive attitude about general working conditions.	.68	.26	-.36
17. The extent to which problems are regarded as opportunities to seek improvements.	.51	.36	.49
18. The extent of opportunities available to staff members for professional growth and improvement.	.43	.24	.29
Cohesiveness (F2)			
11. The extent to which new members of staff are made to feel a part of the group by other staff members.	.34	.74	.13
19. The extent to which members of staff show kindness toward other staff members and students.	.18	.73	.36

continued . . .

TABLE 5.5 (continued)

Items Grouped According to Factors	Factor Loadings F1	F2	F3
1. The extent to which members of staff have respect for each other.	.29	.67	.25
12. The extent to which the unique characteristics of individual staff members are recognized and accepted.	.50	.65	.16
13. The extent to which there is collaboration among members of staff indifferent positions.	.33	.64	.29
4. The extent to which members of staff share their concerns with one another.	.22	.60	.34
14. The extent to which the staff members in the school are committed to working together as a faculty.	.44	.60	.37
Commitment (F3)			
9. The extent to which members of staff hold high expectations for student achievement.	.23	.00	.80
3. The extent to which members of staff take pride in their work.	.20	.31	.71
16. The extent to which the members of staff look for better ways to do their work.	.19	.42	.68
20. The degree of interest and caring teachers take in their students' learning.	.10	.50	.65
7. The enthusiasm which members of staff have for their work.	.45	.34	.58
15. The extent to which the school staff works hard to maintain good relations with parents.	.20	.44	.57

a positive attitude about working conditions (number 8), and opportunities being made available to staff for professional improvement (numbers 17 and 18). Number 17 which was specifically concerned with the extent to which problems are regarded as opportunities to seek improvements also loaded on the third factor, commitment.

Cohesiveness

The second factor, cohesiveness, is reflective of the relationships between the staff members themselves. The seven items relating to the cohesiveness scale describe the extent to which staff members feel a part of the group by showing kindness to one another (numbers 11 and 19), being respectful of one another (number 1), recognizing each other's unique characteristics (number 12), collaborating with one another (number 13), sharing concerns (number 4), and being committed to working together as a faculty (number 14). Of these items, numbers 12 and 14 loaded on the first factor, empowerment.

Commitment

The six items in the commitment scale focus on the teachers' interest in their work and and caring about their students. Numbers 9 and 20 are concerned with the teachers holding high expectations for student achievement and caring about student learning. Numbers 3 and 7 deal with teachers

showing pride and enthusiasm, while number 16 deals with teachers looking for better ways to do their work. Number 15, the last item in this scale, draws attention to maintaining good relations with parents.

Three of the items, numbers 15, 16, and 20, in this scale also loaded onto the cohesiveness scale, while item number 7 loaded onto the empowerment scale.

Part D. Secondary School Effectiveness Survey

Thirteen of the 14 items in the Part D of the questionnaire entitled, Secondary School Effectiveness Survey, were subjected to varimax factor analysis. A five factor solution served best because the items clustering to yield the factors appeared to be focussing on similar concepts. As indicated in Table 5.6, these factors were labelled as follows: (a) achievement emphasis, (b) support for school activities, (c) administrative leadership, (d) student attentiveness, and (e) teacher recognition. These five factors are referred to in the present study as specific school attributes.

The two guidelines used in determining which items belonged in a given scale were (a) the highest numerical factor loadings, and (b) consideration of whether the items fit conceptually with the factor solution.

Table 5.6

Rotated Varimax Five Factor Solution for Twelve Secondary School Effectiveness Items

Items Grouped According to Factors	Factor Loadings				
	F1	F2	F3	F4	F5
Achievement Emphasis (F1)					
5. Student assessment information is used regularly to monitor student progress.	.79	.05	.24	.14	.13
4. Incentive and reward systems provide recognition for student achievement.	.69	.24	.19	.09	.21
7. Teachers are committed to achieving excellence in their teaching and related school activities.	.60	.44	-.00	.07	.32
1. Clear academic goals are established for the school.	.59	.20	.51	.18	.06
2. Each individual student is achieving to his or her potential.	.55	.35	.14	.37	.04
Support for School Activities (F2)					
6. Students participate in extracurricular activities within the school.	.30	.80	.08	.03	.14
13. Parents provide support for school activities.	.10	.59	.46	.21	.22
Administrative Leadership (F3)					
12. Courses within subject fields are articulated across the grades.	.24	.11	.81	.12	.16
11. School administrators provide strong administrative leadership.	.25	.14	.54	.24	.50

continued . . .

TABLE 5.6 (continued)

Items Grouped According to Factors	Factor Loadings				
	F1	F2	F3	F4	F5
Student Attentiveness (F4)					
9. There are few disruptions in the school to distract student attention when students are in class.	.10	-.06	.10	.81	.37
3. Student behavior within the school is orderly.	.25	.39	.24	.70	-.14
Teacher Recognition (F5)					
8. Teachers are recognized and/or rewarded for excellent performance.	.23	.22	.22	.12	.80

Achievement Emphasis

Achievement emphasis was the first factor identified by the varimax factor analysis. Five items from the Secondary School Effectiveness Survey clustered together for this scale. The first item of this cluster (number 5) asked teachers to consider the extent to which student assessment information was used to regularly monitor student achievement. The second item (number 4) asked about the incentive and reward systems used within the school to provide recognition for student achievement. The third item (number 7) focussed on the extent to which teachers are committed to achieving excellence in their teaching and related school activities. The next item (number 1) in the cluster centered on the extent to which clear academic goals are established for the school, while the last item (number 2) asked teachers whether they felt that the students in the school were achieving to their potential. The common element appeared to be the emphasis on achievement. One item, however, number 7, overlapped with the second factor, support for school activities.

Support for School Activities

The second factor obtained by the varimax factor analysis was named support for school activities. Two items clustered for this factor. The first item (number 6) centered on student participation in extracurricular

activities within the school while the focus of the second item (number 13) was on parental support for school activities. Item 13 also loaded onto the third factor, administrative leadership.

Administrative Leadership

The third factor obtained by the varimax factor analysis was named administrative leadership. Two items clustered to provide this factor. In one question (number 12) teachers were asked to judge the extent to which courses within subject fields were articulated across the grades and in the other (number 11) the extent to which school administrators provided strong leadership within the school.

Effective organization of the school curriculum and monitoring the implementation of the curriculum was considered to be evidence of strong administrative leadership in the current study.

Student Attentiveness

The fourth factor of the varimax factor analysis was named student attentiveness. Two items clustered to provide this factor. For the first item (number 9) teachers rated the extent to which there were disruptions that distracted student attention when students were in class. It was assumed that teachers would take into account not only

student initiated disruptions but also such disruptions as announcements and unannounced visitors to the classroom. In the second item (number 3) teachers rated the extent to which student behavior within the school was orderly. The orderly behavior of students was assumed to contribute to the overall effectiveness of the senior high schools.

Teacher Recognition

Only one item comprised the fifth factor, teacher recognition. This item (number 8) asked respondents to rate the extent to which they perceived teachers to be recognized and/or rewarded for excellent performance. Teacher recognition was considered to be important in achieving effectiveness in schools.

School Pride

Item 10 of the questionnaire had been designed to obtain information about a positive school spirit. When subjected to the varimax factor analysis, this item loaded almost equally on three of the following factors: support for school activities, student attentiveness, and teacher recognition (Table 5.7). This item was also highly correlated with the other two global measures of effectiveness, namely, overall satisfaction ($r = .71$) and overall effectiveness ($r = .85$). Hence, along with overall

effectiveness and overall satisfaction, it served best as a measure of global effectiveness.

Table 5.7

Rotated Varimax Factor Solution for Item Used as Global Effectiveness Measure

Items Grouped According to Factors	Factor Loadings				
	F1	F2	F3	F4	F5
10. Staff and students are proud of their school	.28	.48	.18	.44	.43

Global Measures of Effectiveness

Three measures were used as indicators of effectiveness to categorize those schools that were more effective and those that were less effective. These global effectiveness measures were overall effectiveness, overall satisfaction, and school pride.

Overall Effectiveness

The overall global effectiveness measure was one of the measures used to categorize the more effective schools and the less effective senior high schools. It was derived from

item 14, the last item, in Part D of the questionnaire, Secondary School Effectiveness Survey.

For this item, teachers were asked to rate the extent to which they believed their school was effective overall on a seven-point scale ranging from very low to very high. The mean score of the entire sample of schools obtained for item 14 was used as the criteria for determining which of the 43 schools were more effective and which were less effective. Those schools with a mean score on item 14 which was above the entire sample mean score of 5.27 were categorized as more effective while those schools with a mean score at or below the entire sample mean score were categorized as less effective.

Overall Satisfaction

The overall global satisfaction measure was also one of the measures used to categorize the more effective and the less effective senior high schools. The last item, number 21, in the Part C (School Climate) of the questionnaire, Inventory of School Operations, was not included in the factor analysis as it was intended to be utilized as a global measure of effectiveness.

Item 21 invited teachers to rate their degree of overall satisfaction with the school climate on a seven-point scale ranging from very high to very low. The computed mean of the entire sample of schools on this item served as

the standard for categorizing schools as more effective or less effective in the present study. The schools with a mean score above the entire sample mean score of 5.22 on item 21 were categorized as more effective. The schools with a mean score which was at or below the entire sample mean score were categorized as less effective.

School Pride

School pride was another global measure of effectiveness used to categorize the more effective and less effective senior high schools. School pride emerged as a global indicator from the varimax factor analysis performed on 13 items of the Secondary School Effectiveness Survey questionnaire. As previously indicated (Table 5.7), this measure was derived from item number 10 in the questionnaire which had loaded on three factors. For this item, teachers were asked to rate the extent to which they perceived staff and students to be proud of their school on a seven-point scale ranging from very low to very high.

School pride was assumed to be indicative of a sense of shared purpose between the students and school staff to show support for their school resulting in a positive school spirit.

All schools with a mean score on this measure above that of the entire sample of schools, i.e. 5.06, were categorzed as more effective while those schools with a mean

score at or below the entire sample mean score were categorized as less effective.

Categorization of Schools

The entire sample mean scores of the three global effectiveness measures -- overall effectiveness, overall satisfaction, and school pride -- served as the criteria for categorizing the senior high schools involved in the study as more effective or less effective.

First Stage

The first step in this procedure involved computing mean scores for each global effectiveness measure for every school and for the entire sample of 43 schools. Next, schools were ranked on each measure according to the mean scores obtained for each school (Table 5.8). Schools were then placed into one of the two groups, more effective or less effective, based on their standing in the rank order. All schools with a mean score above the total sample mean score of 5.27 on overall effectiveness were classified as more effective. Similarly, all schools with a mean score above the total sample mean score of 5.22 on overall satisfaction and those schools with a mean score above the total sample mean score of 5.06 on school pride were classified as more effective. Schools whose mean scores were

Table 5.8

Mean Scores of Senior High Schools on Global Effectiveness Measures

		Overall Effectiveness		Overall Satisfaction		School Pride	
		Mean	S.D.	Mean	S.D.	Mean	S.D.
Entire sample of schools		5.27	1.01	5.22	1.38	5.06	1.20
School	Rank ***	Mean	S.D.	Mean	S.D.	Mean	S.D.
A*	1.5	6.18	.75	6.45	.52	6.36	.67
B*	1.5	6.18	.40	5.36	.80	6.45	.52
C*	3	6.11	.92	6.22	.97	6.33	.86
D*	4.5	5.82	.88	5.47	1.12	5.58	1.17
E*	4.5	5.82	.80	5.41	1.27	5.58	.79
F*	6.5	5.73	1.03	5.53	1.35	5.33	1.49
G*	6.5	5.73	.70	5.40	1.45	5.66	.97
H	8	5.72	.82	5.22	1.40	5.61	.91
I*	9.5	5.66	.89	6.20	1.01	5.86	.99
J	9.5	5.66	1.04	6.00	1.00	4.80	1.14
K	11	5.63	.80	5.70	1.05	4.81	.60
L*	12	5.61	.76	5.84	.89	5.30	.63
M*	13	5.57	1.39	5.71	1.25	5.71	1.11
N*	14	5.55	.72	5.33	1.11	5.66	1.00
O*	16	5.50	.63	5.81	.91	5.56	.96
P	16	5.50	.65	5.22	1.32	5.50	.85
Q	16	5.50	1.00	4.66	1.72	5.41	1.16
R*	18	5.47	.69	5.63	1.01	5.26	.93
S	19	5.46	.99	5.13	1.35	5.06	1.16
T	20	5.41	.79	4.91	1.24	4.66	1.15
U*	21	5.40	1.05	6.00	1.30	5.86	1.12
V*	22	5.33	1.22	5.77	.97	5.33	1.58

* Schools whose mean scores are above the entire sample mean on all three global effectiveness measures (More Effective Group).

*** Ranked from highest to lowest according to overall effectiveness ratings. Same ranking is used for schools with the same mean score.

Table 5.8 (continued)

		Overall Effectiveness		Overall Satisfaction		School Pride	
		Mean	S.D.	Mean	S.D.	Mean	S.D.
Entire sample of schools		5.27	1.01	5.22	1.38	5.06	1.20
School	Rank ***	Mean	S.D.	Mean	S.D.	Mean	S.D.
AA	23	5.27	.82	5.72	1.07	4.94	1.25
BB**	24	5.23	.72	4.58	1.56	5.00	.81
CC	25	5.21	1.12	5.50	1.28	5.42	.93
DD**	26	5.18	1.16	4.62	1.82	5.00	1.26
EE	27.5	5.13	1.06	5.13	1.24	5.53	.99
FF**	27.5	5.13	1.12	4.46	1.40	4.53	1.06
GG**	29	5.11	.92	4.68	1.40	4.47	1.00
HH**	30	5.06	.85	4.62	1.45	4.37	1.02
II	31.5	5.00	.63	5.36	.80	4.90	1.04
JJ	31.5	5.00	.86	5.33	1.73	5.22	.97
KK**	33	4.93	1.09	5.00	1.81	4.60	1.35
LL**	34	4.88	.99	5.22	.90	4.70	1.10
MM**	35	4.85	.69	4.57	1.27	4.57	.53
NN**	36.5	4.75	1.11	4.60	1.42	3.80	1.36
OO**	36.5	4.75	.85	4.43	1.03	4.31	1.07
PP	38	4.70	.82	5.50	1.08	4.30	.94
QQ**	39	4.64	1.08	5.14	1.46	4.50	.85
RR**	40	4.54	1.29	4.63	1.91	5.00	1.18
SS**	41	4.37	.88	4.73	1.22	4.00	1.26
TT**	42	4.28	.99	3.85	1.99	4.00	1.03
UU**	43	3.83	1.16	4.16	1.72	3.66	1.03

** Schools whose mean scores are at or below the entire sample mean on all three global effectiveness measures (Less Effective Group).

*** Ranked from highest to lowest according to overall effectiveness ratings. Same ranking is used for schools with the same mean score.

at or below the total sample mean scores for each of the three global effectiveness measures were classified low in effectiveness.

Second Stage

A second screening of the lists of schools rated as more effective and less effective was conducted to select the most effective and least effective schools on all three measures. The lists of the schools identified as effective on each global measure of effectiveness (overall effectiveness, overall satisfaction, and school pride) were compared in order to identify the schools whose mean scores were above the entire sample mean scores on all of the global effectiveness measures. Fifteen schools met this criterion and were placed in the more effective category.

The lists of schools below the mean on each of the global effectiveness measures were also compared in order to identify those schools whose mean scores were at or below the entire sample mean scores on all three global effectiveness measures. Fifteen schools also met this criterion and were classifed as less effective.

The remaining 13 schools whose mean scores were above the overall mean on one or two of the global measures and below the overall mean on one or two of the measures were omitted from further analysis.

Third Stage

The mean scores of the global effectiveness measures (overall effectiveness, overall satisfaction, and school pride) for each group of schools, more effective and less effective) were subjected to *t*-tests to confirm that there were statistically significant differences between the schools on each of the measures. Results showed that there were statistically significant differences. A comparison of the more effective schools (Group 1) with the less effective schools (Group 2) showed statistically significant differences in means at the .01 level for all three global effectiveness measures: overall satisfaction, overall effectiveness, and school pride (Table 5.9). Hence the *t*-test confirmed that the global effectiveness measures discriminated well between the more effective and less effective groups of schools.

The profile (Figure 5.1) for the global effectiveness measures also shows how the mean scores for the more effective and less effective school groups compare on each of the global effectiveness measures. Overall satisfaction received the highest rating by teachers in the more effective schools, followed by school pride and overall effectiveness. The greatest difference in the mean scores between the more effective and less effective school groups occurred for the measure of school pride.

Table 5.9

Results of t-Tests for Mean Scores of More Effective (Group 1) and Less Effective (Group 2) Schools on Global Measures of Effectiveness

Global Effectiveness Measure	Group	N	Mean	S.D.	T-Value	D.F.	P(Two-Tail)
Overall Effectiveness	1	15	5.71	0.27	7.71	28	0.000 **
	2	15	4.77	0.38			
Overall Satisfaction	1	15	5.74	0.34	8.86	28	0.000 **
	2	15	4.62	0.34			
School Pride	1	15	5.72	0.38	8.73	28	0.000 **
	2	15	4.43	0.42			

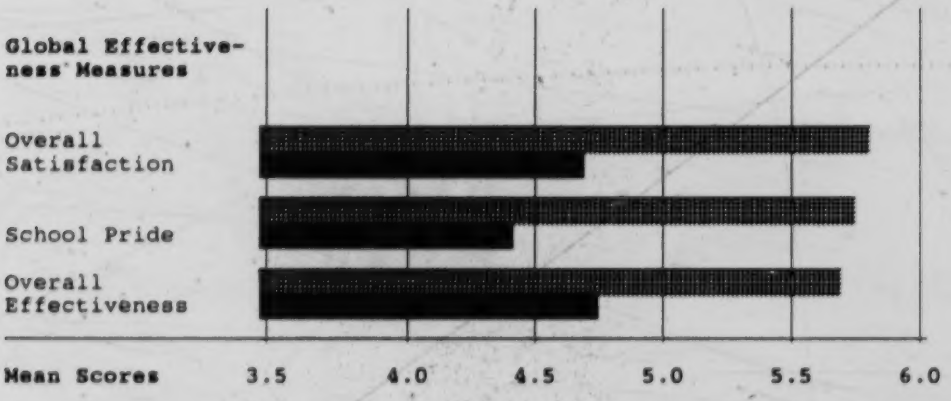
** $p < .01$

Means were calculated on the basis of the following response scales:

7 Very High, 6 High, 5 Moderately High, 4 Medium,
3 Moderately Low, 2 Low, 1 Very Low.

Figure 5.1

Profiles of More Effective Schools and Less Effective Schools on Global Effectiveness Measures



Note. Profiles established according to mean score ranking of the more effective schools. Potential range of mean scores is 1.0 to 7.0.

More Effective Schools
Less Effective Schools

Fourth Stage

The mean scores on administrative behavior, administrative structure, school climate, and specific school attribute factors for the group of 15 schools categorized as the more effective schools and the mean scores on these factors for the group of 15 schools categorized as less effective were then subjected to further analysis. t-Tests were used to determine differences in these means beyond the .05 level of statistical significance for the two groups of schools.

Characteristics of the Schools

Data were collected on six characteristics of each of the 43 senior high schools that participated in the study. These characterisitics were school setting, grades served, number of students, number of full-time equivalent certified teachers, number of assistant/vice principals, and number of department heads.

The principals of the schools were asked to provide the information on each characteristic. The results for the entire sample of schools, and for the more effective and less effective schools are shown in Table 5.10. Following is a comparison of the six characteristics for the more effective and less effective schools.

Table 5.10

Characteristics of Schools

Characteristics	Totals		
	Entire Sample of Schools	More Effective Schools	Less Effective Schools
Setting			
Rural	1	1	0
Village/Small Town	10	4	3
Large Town/Small City	12	2	6
Suburban Area of Large City	3	2	0
Large City	17	6	6
Grades Served			
7 to 12	2	1	0
8 to 12	1	0	1
9 to 12	11	3	5
10 to 12	29	11	9
Number of Students			
Fewer than 100	0	0	0
100 to 499	12	5	4
500 to 999	14	6	5
1 000 to 1 499	8	2	3
1 500 to 1 999	9	2	3
2 000 or More	0	0	0
Full-time Teachers			
20 to 24	8	4	2
25 to 50	17	6	7
50 to 100	17	5	5
More than 100	1	0	1

continued . . .

Characteristics of Schools (continued)

Characteristics	Totals		
	Entire Sample of Schools	More Effective Schools	Less Effective Schools
Number of Assistant/Vice Principals			
One	13	5	4
Two	17	6	6
Three	17	4	5
Four	0	0	0
Five	0	0	0
More Than Five	0	0	0
Number of Department Heads			
None	14	4	6
1 or 2	8	2	1
3 or 4	4	0	0
5 or 6	6	4	2
7 or 8	5	2	3
More Than 8	6	3	3

School Setting

Five categories to describe the setting of the schools' locations were utilized in the questionnaire. These categories were the following: rural, village or small town, large town or small city, suburban area of a large city, and medium size or large city.

Of the 15 more effective senior high schools, one was located in a rural setting. Students are transported by bus to such schools from the surrounding rural area. Four of the schools were located in a village or small town. Two schools were located in a large town or small city, two schools were in a suburban area of a large city, and six were located in a medium size or large city. Of the 15 less effective senior high schools, there were no schools located in a rural area or in a suburban area of a large city. Three of the schools were located in a village or small town, six were in a large town or small city, and six were in a large city. Overall, there seemed to be no clear relationship between school effectiveness as measured in this study and the setting of the school.

Grades Served

Although most schools which were selected on the basis of stratified random sampling and asked to participate in the study had students enrolled in Grades 10, 11, and 12 only, some of the schools did have students in grades 7, 8,

and/or 9. Thus categories were designed to collect this information. Principals indicated whether their schools had students enrolled in Grades 7-12, 8-12, 9-12, or 10-12.

Since the study was focussed on the senior high school, most schools had students enrolled in Grades 10 to 12. Eleven of the 15 more effective schools had students enrolled in Grades 10 to 12. Three of the 15 schools also served students enrolled in Grades 9 to 12, and one school served students enrolled in Grades 7 to 12.

There were no schools serving Grades 7 to 12 in the less effective group of schools. One school, however, served Grades 8 to 12. Five of the schools served Grades 9 to 12 and nine schools served Grades 10 to 12.

Number of Students

The senior high schools which participated in the study had varying student populations. Categories for this item indicated whether there fewer than 100 students, 100 to 499, 500 to 999, 1 000 to 1 499, 1 500 to 1 999, or 2 000 or more students.

None of the 15 schools in the more effective group had fewer than 100 students. Student enrollment in five of the schools averaged between 100 and 499 students, and between 500 and 999 in six other schools. Four schools were very large schools with two schools having a student population

which was between 1 000 and 1 499, and two schools a population between 1 500 and 1 999.

As with the more effective group of schools, the student population of the less effective schools ranged between 100 and 1 999. Four of the 15 schools had a student population between 100 and 499, five schools a student population of 500 to 999, three schools a student population of 1 000 to 1499, and three schools a population of 1 500 to 1 999.

Number of Full-time Equivalent Certified Teachers

For the current study, schools were selected which had no fewer than 20 full-time equivalent certified teachers on staff. However, more specific information regarding the number of full-time equivalent teachers on staff in a particular school was obtained from item four of the questionnaire. The categories for collecting this information included the following: fewer than 24, 25 to 50, 50 to 100, and more than 100.

In the more effective group of schools, four of the schools had 20 to 24 full-time equivalent teachers on staff, six of the schools had 25 to 50 teachers, while five schools had 50 to 100 teachers.

In comparison, two of the less effective schools had a staff of 20 to 24 full-time equivalent teachers. Seven

schools had 25 to 50 teachers on staff, five schools had 50 to 100 teachers, and one school had more than 100 teachers.

Number of Assistant/Vice Principals

For purposes of the present study the assistant/vice principals were considered as working together with the principal as a team in the administration of the school. Information was sought regarding the number of persons that were designated as assistant/vice principals within a school.

Of the 15 more effective senior high schools, five schools had only one administrative assistant to the principal. Six of the schools had two assistants and four schools had three.

As was the case with the group of 15 more effective schools, the number of assistants to the principal ranged between one and three for the less effective group. Four schools had only one assistant/vice principal, six of the schools had two, and five schools had three.

Number of Department Heads

Since senior high schools tend to be departmentalized, department heads were also considered as part of the team attending to administrative matters within the school. Persons designated as department heads assume responsibility in coordinating the activities of the various subject areas.

Principals were asked to give information regarding the number of persons that served as department heads.

A wider range among the schools in the number of persons serving as department heads when compared to the number serving as assistant/vice principals was noted. Of the 15 more effective schools, four of the schools did not have department heads. Two schools had only one or two. However, four schools had five or six persons serving as department heads, two schools seven or eight, and three schools had more than eight.

In the less effective group of schools, six of the schools had no persons on staff who served as department heads and one school had one or two department heads. However, in this group there was also a large number of schools that had several persons designated as department heads. Two schools had five or six persons serving as department heads, three schools had seven or eight, and three schools had more than eight.

Summary

The items in the four parts of the questionnaire, Inventory of School Operations, were subjected to varimax factor analysis and a total of 20 factors were derived. Administrative Behavior, Part A, yielded ten factors for three categories based on Mintzberg's (1973) classification

of the behavior of managers: interpersonal role behaviors -- figurehead, leader, and liaison; informational role behaviors -- monitor, disseminator, and spokesperson; and decisional role behaviors -- entrepreneur, disturbance handler, and resource allocator. Two factors, formalization and decentralization, were derived from Part B of the questionnaire "Administrative Structure". A further three factors: empowerment, cohesiveness, and commitment were obtained from Part C, "School Climate". A total of five factors were derived from Part D, "Secondary School Effectiveness Survey": achievement emphasis, support for school activities, administrative leadership, student attentiveness, and teacher recognition.

Three global measures of effectiveness were obtained from three items in the questionnaire, "Inventory of School Operations": overall effectiveness, overall satisfaction, and school pride. The entire sample mean scores of these global measures effectiveness were utilized as the criterion scores to categorize the more effective and less effective groups of schools.

Information was collected on the characteristics of the 43 schools which participated in the study. These included school setting, grades served, number of students in the school, number of full-time equivalent certified teachers, number of assistant/vice principals, and number of department heads.

Overall, it appears that there are few differences when the 15 more effective and the 15 less effective groups of schools are compared on these characteristics. Some differences occurred in school locations. Four more schools in the less effective group were located in a large town or small city and there were no schools located in rural area or in a suburban area of a large city. In the more effective group, however, one senior high school was a rural school and two were in a suburban area of a large city. There were no distinguishing features according to grades served for the two groups of schools.

When the student enrollment is taken into account, there were two more schools serving a larger student population (1 500 or more) in the less effective group of schools than in the more effective group. There appears to be little difference in the ratio of full-time equivalent certified teachers to the student population in either the more effective or less effective schools.

The number of assistant/vice principals within the schools did not vary much. Schools in both groups, more effective and less effective, had between one and three assistant/vice principals. The number of department heads varied from zero to more than eight; but, when the two groups of schools were compared overall, few differences were noted.

CHAPTER SIX

PROFILES OF ORGANIZATIONAL ELEMENTS AND SPECIFIC SCHOOL ATTRIBUTES

This chapter presents the findings related to the five research questions. The first four questions explore the differences between the more effective and less effective senior high schools in relation to administrative behavior, administrative structure, and school climate (i.e. organizational elements) and specific school attributes. The fifth question asks what factors are the best predictors of the global effectiveness measures: overall effectiveness, overall satisfaction, and school pride.

Comparison of Means

The first step in answering research questions one to four was to compute the mean scores for the administrative behavior, administrative structure, school climate, and specific school attribute scales for each of the two groups of 15 schools, more effective and less effective, and for the entire sample of 30 schools (Table 6.1).

The next step was to subject the mean scores of each scale for each school group to a t-test in order to check

Table 6.1

Mean Scores of More Effective (Group 1) and Less Effective (Group 2) Schools for All Variables

Variables	Entire Sample	S.D.	Group 1*	S.D.	Group 2	S.D.
Global Effectiveness Measures						
Overall Satisfaction	5.18	.66	5.74	.34	4.62	.34
Overall Effectiveness	5.42	.58	5.71	.27	4.77	.38
School Pride	5.08	.76	5.72	.38	4.43	.42
Administrative Behavior						
Interpersonal Role						
Liaison	5.94	.36	6.14	.22	5.74	.38
Figurehead	5.66	.47	5.85	.36	5.48	.51
Leader	5.46	.52	5.76	.25	5.16	.55
Informational Role						
Disseminator	5.64	.51	5.93	.34	5.35	.51
Spokesperson	5.09	.60	5.44	.21	4.74	.68
Monitor	4.75	.58	5.00	.43	4.51	.63
Decisional Role						
Negotiator	5.39	.52	5.77	.22	5.01	.46
Resource Allocator	5.24	.42	5.49	.23	4.99	.42
Disturbance Handler	5.12	.46	5.34	.24	4.90	.53
Entrepreneur	4.71	.48	4.94	.41	4.47	.45

*Ranked according to Group 1 mean scores.

continued . . .

Table 6.1 (continued)

Mean Scores of More Effective (Group 1) and Less Effective (Group 2) Schools for All Variables

Variables	Entire Sample	S.D.	Group 1*	S.D.	Group 2	S.D.
Administrative Structure						
Formalization	5.51	.57	5.66	.33	5.36	.71
Decentralization	4.65	.68	5.11	.32	4.20	.64
School Climate						
Commitment	5.33	.43	5.66	.23	5.00	.32
Cohesiveness	5.11	.55	5.44	.41	4.77	.46
Empowerment	4.72	.63	5.22	.25	4.23	.48
Specific Effectiveness Attributes						
Achievement Emphasis	5.11	.41	5.42	.24	4.80	.30
Administrative Leadership	4.99	.61	5.36	.32	4.61	.62
Support for School Activities	4.75	.70	5.24	.45	4.27	.54
Student Attentiveness	4.85	.55	5.15	.37	4.54	.53
Teacher Recognition	4.07	.76	4.61	.44	3.54	.65

*Ranked according to Group 1 mean scores.

for differences between the two groups. The mean scores for each variable were then plotted on graphs to create profiles which facilitate visual scanning of the data and detecting differences and similarities between the more effective and less effective senior high schools.

Administrative Behavior

In order to answer the first research question which asked what differences, if any, are there in administrative behavior between the more effective and less effective schools, it was necessary to find out if there were statistically significant differences in the ten administrative behaviors between the two groups of schools.

t-Tests of statistical significance were utilized to compare the mean scores of the more effective (Group 1) with the less effective (Group 2) schools for the ten administrative behavior scales. The t-tests showed significant differences in means for the three scales in the interpersonal role category, the three scales in the informational role category, and the four scales in the decisional role category (Table 6.2). Differences in the mean scores of the ten scales are also presented in Figure 6.1.

In the interpersonal role category, differences in mean scores between the more effective and less effective schools were statistically significant at the .01 level for the

Table 6.2

Results of t-Tests for Mean Scores of More Effective (Group 1) and Less Effective (Group 2) Schools on Administrative Behavior

Administrative Behavior	Group	N	Mean	S.D.	T-Value	D.F.	P(Two-Tail)
Interpersonal Role							
Liaison	1	15	6.14	0.22	3.46	28	0.002 **
	2	15	5.74	0.38			
Figurehead	1	15	5.85	0.36	2.27	28	0.031 *
	2	15	5.48	0.51			
Leader	1	15	5.76	0.25	3.83	19.59	0.001 **
	1	15	5.16	0.55			
Informational Role							
Disseminator	1	15	5.93	0.34	3.60	28	0.001 **
	1	15	5.35	0.51			
Spokesperson	1	15	5.44	0.21	3.75	16.64	0.002 **
	1	15	4.74	0.68			
Monitor	1	15	5.00	0.43	2.51	28	0.018 *
	1	15	4.51	0.63			
Decisional Role							
Negotiator	1	15	5.77	0.22	5.79	28	0.000 **
	2	15	5.01	0.46			
Resource Allocator	1	15	5.49	0.23	3.97	22.10	0.001 **
	2	15	4.99	0.42			
Disturbance Handler	1	15	5.34	0.24	2.91	19.54	0.009 **
	2	15	4.90	0.53			
Entrepreneur	1	15	4.94	0.41	2.99	28	0.006 **
	2	15	4.47	0.45			

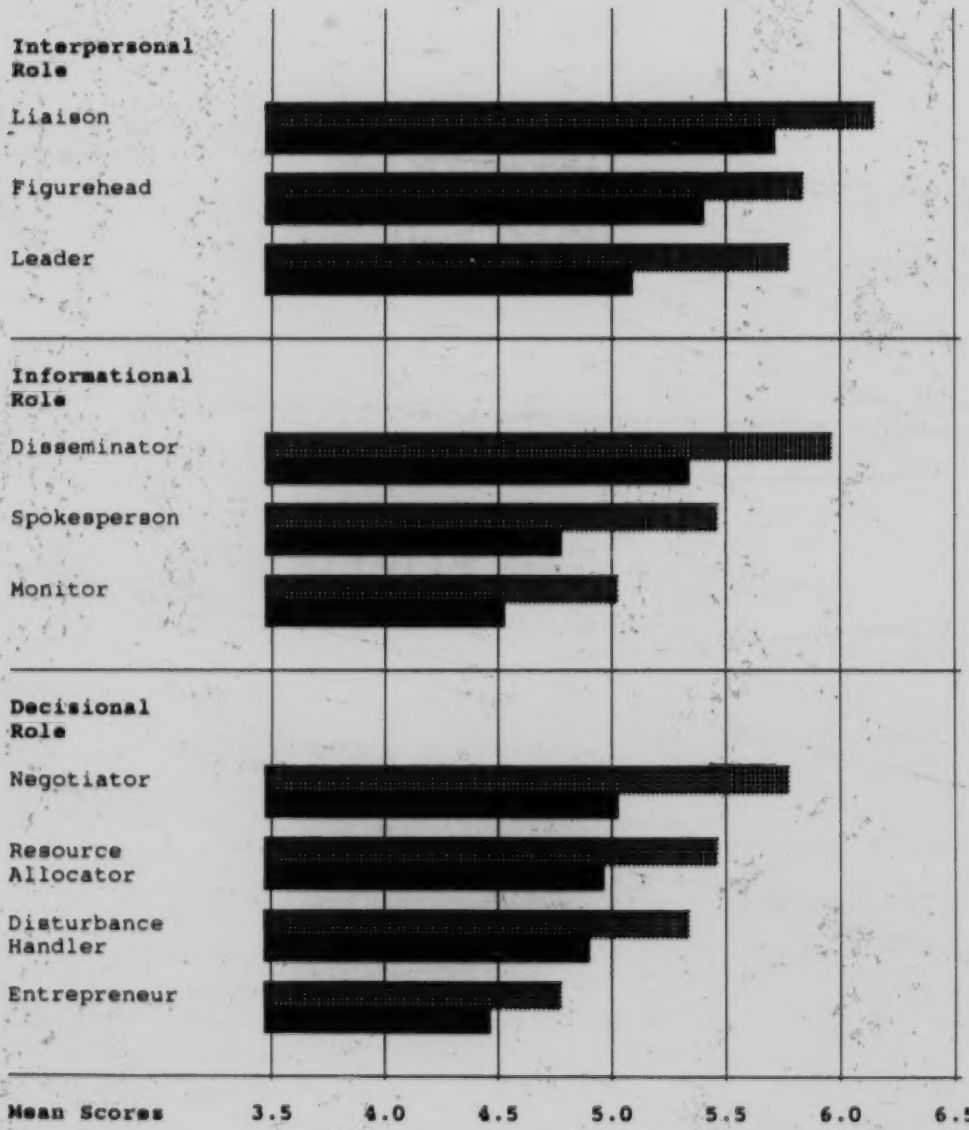
* $p < .05$
** $p < .01$

Means were calculated on the basis of the following response scales:

7 Always, 6 Almost Always, 5 Often, 4 Sometimes,
3 Seldom, 2 Almost Never, 1 Never.

Figure 6.1

Profiles of More Effective Schools and Less Effective Schools on Administrative Behavior



Note. Profiles established according to mean score ranking of the more effective schools.

liaison and leader behaviors while differences in means for the figurehead behaviors were significant at the .05 level.

Figure 6.1 shows that the liaison behaviors were the most frequently observed by all teachers regardless whether they were in the more effective or less effective schools. Overall, the data suggest that administrators in the more effective schools carried out the interpersonal role behaviors more frequently than did the administrators in the less effective schools. It appears that administrators in the effective schools were more visible at social and business events (liaison role), more often assumed leadership with respect to setting goals and emphasizing performance standards for students and teachers (figurehead role), and regularly served as links between the schools and the community (leader role). Of the interpersonal behaviors, the greatest difference between the more effective and less effective schools was observed for the leader behaviors.

Statistically significant differences in the mean scores between the more effective and less effective schools for the informational role behaviors were also obtained (Table 6.2). *t*-Tests showed that the differences in the mean scores of the disseminator and spokesperson behaviors were significant at the .01 level while the mean score differences of the monitor behaviors were significant at the .05 level.

Examination of Figure 6.1 indicates that the disseminator behaviors were the ones most frequently observed by teachers in both groups of schools, more effective and less effective. However, it appears that in the more effective schools administrators carried out all of the informational role behaviors more effectively. Data show that administrators kept teachers and parents more informed of policy changes and school activities (disseminator behavior). The administrators represented the views of the school staff more often to central office personnel and the community (spokesperson behavior). They more frequently monitored the instructional program and the performance of students and teachers, and provided feedback to them (monitor behavior). The greatest range in mean scores between the more effective and less effective schools was obtained for the spokesperson behaviors.

All the decisional role behaviors of negotiator, resource allocator, disturbance handler, and entrepreneur showed statistically significant differences in the mean scores between the more effective and less effective schools at the .01 level (Table 6.2). Overall, teachers in the more effective schools perceived administrators to have been more aggressive in carrying out the decisional role. Results indicate that administrators were more apt to exercise diplomacy in decision making and in relating to staff members, various organizations and interest groups

(negotiator behavior), and to make effective decisions regarding the allocation of resources (resource allocator behavior). Teachers believed that administrators established rules, provided support for enforcement of discipline problems and responded with a plan of action to unexpected problems (disturbance handler behavior). They also saw the administrators as taking the initiative in proposing change and devising creative ways to improve the school (entrepreneur behavior).

Figure 6.1 shows that administrators in both of the school groups most frequently carried out the negotiator role behaviors. It also shows that the greatest range in the mean scores between the more effective and less effective schools occurred for these behaviors.

Administrative Structure

The second research question asked what differences, if any, are there in administrative structure between the more effective and less effective schools. To determine whether there were differences in the formalization and decentralization dimensions for administrative structure, the t-test technique was used. Results of the t-tests show that there is a difference at the .01 level of statistical significance in the mean scores of the two school groups for the degree to which decentralization was perceived to be present (Table 6.3). However, there is no difference in the

Table 6.3

Results of t-Tests for Mean Scores of More Effective (Group 1) and Less Effective (Group 2) Schools on Administrative Structure

Structural Attribute	Group	N	Mean	S.D.	T-Value	D.F.	P(Two-Tail)
Formalization	1	15	5.66	0.33	1.48	19.86	0.155
	2	15	5.36	0.71			
Decentralization	1	15	5.11	0.32	4.88	28	0.000**
	2	15	4.20	0.64			

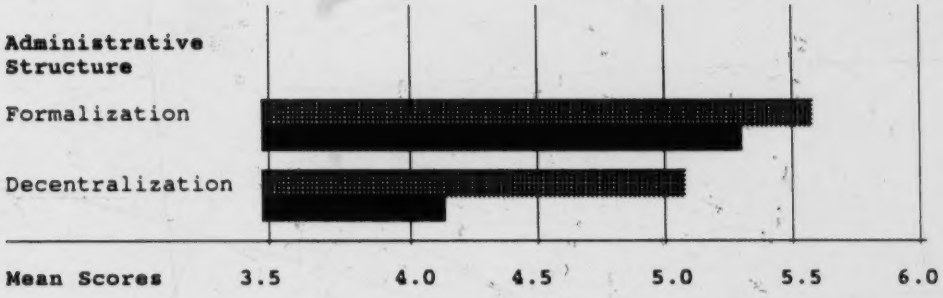
** $p < .01$

Means were calculated on the basis of the following response scales:

7 Very High, 6 High, 5 Moderately High, 4 Medium, 3 Moderately Low, 2 Low, 1 Very Low.

Figure 6.2

Profiles of More Effective Schools and Less Effective Schools on Administrative Structure



Note. Profiles established according to mean score ranking of the more effective schools. Potential range of mean scores is 1.0 to 7.0

More Effective Schools
Less Effective Schools

level of formalization of the administrative structure in schools designated as more effective or less effective.

As also displayed by Figure 6.2., the decentralization dimension of the administrative structures was observed by teachers in practice less often than the formalization dimension in both kinds of schools; but it appears that in the more effective schools, the level of the administrative structure was more decentralized. Teachers saw the roles of the school administrators defined in terms of providing support for teaching and learning. They felt that teacher were encouraged to take the initiative in leadership-type activities and to have input into decision making. They indicated that other units within the school such as task forces or committees were often used in carrying out selected administrative functions and making some operational decisions.

On the other hand it appears that there was a high degree of formalization in both the more effective and less effective schools. Most teachers observed that senior high school administrators followed formalized policies and procedural guidelines. They also perceived that authority relationships were clearly defined and responsibilities for policy making and implementation were clearly designated. All schools appeared to operate according to rules, regulations, and codified job duties that govern the actions of the employees within the schools.

School Climate

The third research question asked what differences, if any, are there in school climate between the more effective and less effective senior high schools. t-Tests of statistical significance confirmed differences in school climate between the more effective and less effective schools. Results showed differences in mean scores between the more effective and less effective schools for each of the climate dimensions (commitment, cohesiveness, and empowerment) to be statistically significant at the .01 level (Table 6.4).

The pattern for the school climate items as displayed by Figure 6.3 showed that, overall, teachers rated the items of the commitment scale highest. The greatest range in mean scores between the more effective and the less effective schools occurred for the practices or conditions that lead to teachers feeling empowered.

Teachers perceived there was a greater degree of trust and cooperation between the school administrators and themselves in the more effective schools (empowerment dimension). They also felt they had more impact on decision making, they were encouraged to be creative, to seek improvements, and to take opportunities to become involved in professional growth activities. They reported teachers more often expressed a positive attitude about general working conditions.

Table 6.4

Results of t-Tests for Mean Scores of More Effective (Group 1) and Less Effective (Group 2) on School Climate

Climate Dimension	Group	N	Mean	S.D.	T-Value	D.F.	P(Two-Tail)
Commitment	1	15	5.66	0.23	6.40	28	0.000**
	2	15	5.00	0.32			
Cohesiveness	1	15	5.44	0.41	4.18	28	0.000**
	2	15	4.77	0.46			
Empowerment	1	15	5.22	0.25	7.06	21.20	0.000**
	2	15	4.23	0.48			

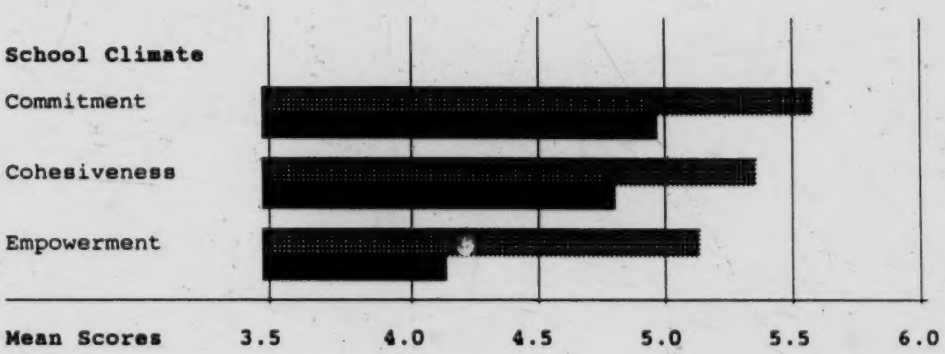
** $p < .01$

Means were calculated on the basis of the following response scales:

7 Very High, 6 High, 5 Moderately High, 4 Medium, 3 Moderately Low, 2 Low, 1 Very Low.

Figure 6.3

Profiles of More Effective Schools and Less Effective Schools on School Climate



Note. Profiles established according to mean score ranking of the more effective schools. Potential range of mean scores is 1.0 to 7.0.

More Effective Schools
Less Effective Schools

Results suggest that staff members in effective schools had better working relations with each other (cohesiveness dimension). Teachers reported that all members of staff were made to feel part of the group, that members showed more kindness and respect for each other, unique characteristics of individual members were recognized and accepted, members shared their concerns with one another, and there was more collaboration and commitment to working together as a faculty.

In more effective schools teachers tended to perceive themselves as being more committed to their work (commitment dimension). They saw themselves as holding high expectations for student achievement, taking pride in their work, being enthusiastic and looking for better ways to do their work, taking an interest in their students' learning, and maintaining good relations with the parents.

Specific School Attributes

The fourth research question asked what differences, if any, are there in specific school attributes between the more effective and less effective senior high schools. To determine whether there were statistically significant differences between the more effective and less effective schools on each of the five specific school attribute variables: achievement emphasis, support for school activities, administrative leadership, student

attentiveness, and teacher recognition, the t-test technique was utilized. Comparisons of the mean scores of the more effective and less effective groups of schools on each of the variables showed differences in means at the .01 level of statistical significance (Table 6.5).

Figure 6.4 shows that in the more effective schools teachers rated the extent to which effective practices or conditions were characteristic of their schools more often than did the teachers in the group of less effective schools. The greatest discrepancy between mean scores occurred for the specific school attribute of teacher recognition.

Teachers judged that there was more emphasis on achievement in the more effective schools (achievement emphasis attribute). They indicated that student progress is monitored more regularly, achievement of students is formally recognized, clear academic goals are established, and teachers are committed to achieving excellence in their teaching and related school activities. They perceived that students were achieving to their potential.

Teachers felt that students participated more in extracurricular activities and that parents provided support for school activities (support for school activities attribute).

There appears to be evidence of strong administrative leadership in the more effective schools (administrative -

Table 6.5

Results of t-Tests for Mean Scores of More Effective (Group 1) and Less Effective (Group 2) Schools on Specific School Attributes

Specific School Attributes	Group	N	Mean	S.D.	T-Value	D.F.	P(Two-Tail)
Achievement Emphasis	1	15	5.42	0.24	6.26	28	0.000 **
	2	15	4.80	0.30			
Administrative Leadership	1	15	5.36	0.32	4.11	21.02	0.000 **
	2	15	4.61	0.62			
Support for School Activities	1	15	5.24	0.45	5.28	28	0.000 **
	2	15	4.27	0.54			
Student Attentiveness	1	15	5.15	0.37	3.63	28	0.001 **
	2	15	4.54	0.53			
Teacher Recognition	1	15	4.61	0.44	5.28	28	0.000 **
	2	15	3.54	0.65			

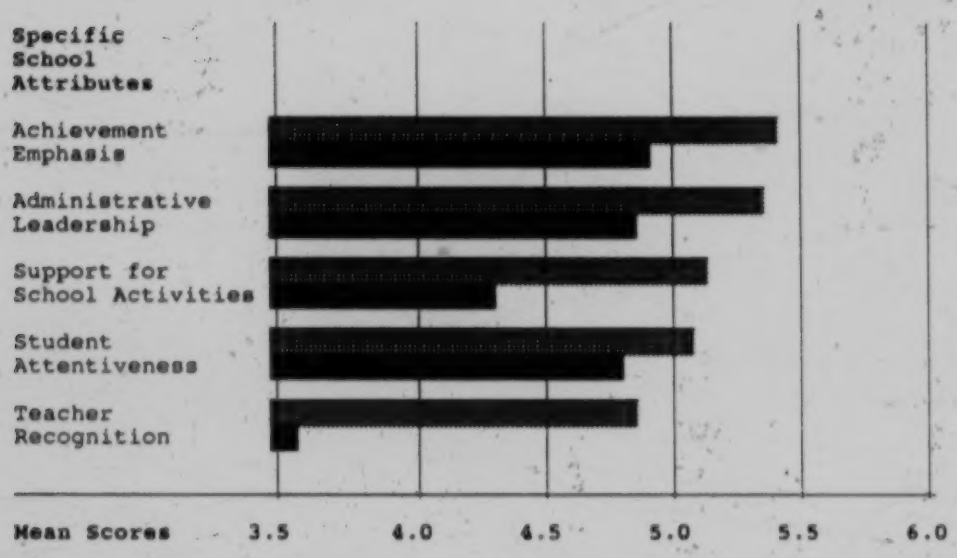
** $p < .01$

Means were calculated on the basis of the following response scales:

7 Very High, 6 High, 5 Moderately High, 4 Medium, 3 Moderately Low, 2 Low, 1 Very Low.

Figure 6.4

Profiles of More Effective Schools and Less Effective Schools on Specific School Attributes



Note. Profiles established according to mean score ranking of the more effective schools. Potential range of mean scores is 1.0 to 7.0.

leadership attribute). Teachers perceived that school administrators monitor the instructional program making sure that courses within subject areas are articulated across the grades. They also felt that teachers are more often rewarded for excellent performance.

In the more effective schools, student behavior was reported to be more orderly (student attentiveness attribute). Teachers in these schools also reported there were few disruptions to distract students' attention when the students are in class.

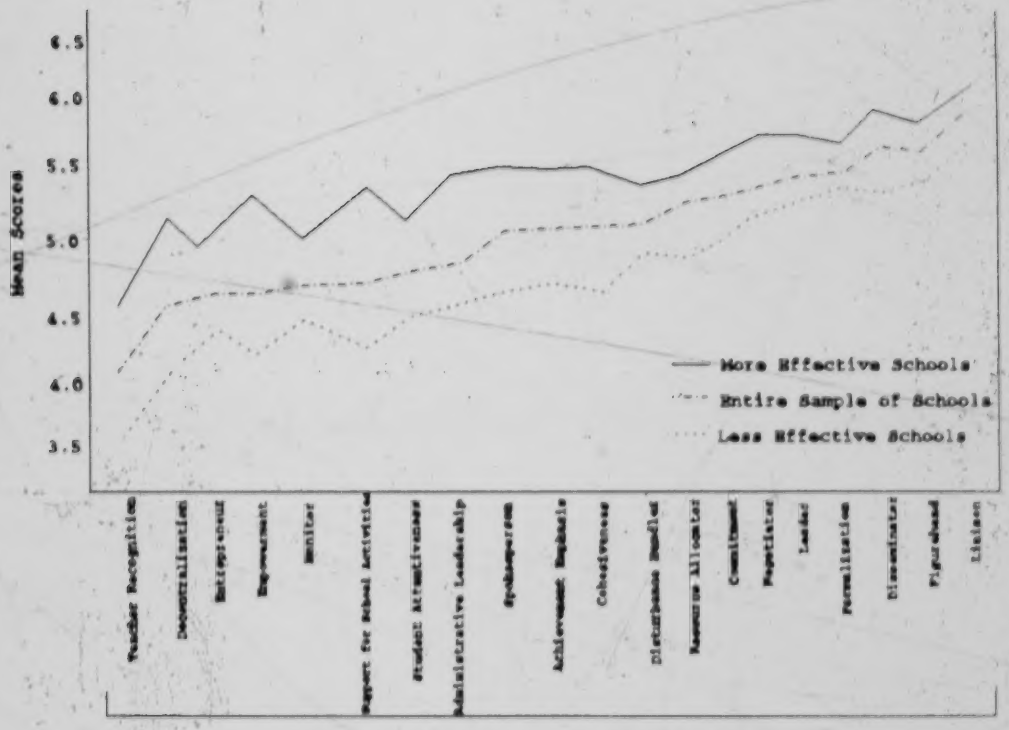
Recognition or reward of teachers' excellent performance was particularly rated by teachers as occurring more often in the effective schools than in the less effective schools (teacher recognition attribute).

Profiles of More Effective and Less Effective Senior High Schools on all Factors

A second approach was adopted to summarize the information gathered through the questionnaire and to illustrate the differences in mean scores between the more effective and less effective senior high schools on each of the factors that were addressed in the first four research questions. This was to create a profile of all of the factors together for the more effective schools and a second profile for the less effective schools (Figure 6.5). As

Figure 6.5

Profiles of More Effective Schools, Less Effective Schools, and Entire Sample of Schools on All Factors



Factors

noted previously, there was a statistically significant difference in mean scores as confirmed by the t-test between the two groups on all factors except for formalization, a dimension of administrative structure.

First, the mean scores for the 20 factors for the sample of 30 schools were rank-ordered lowest to highest (central profile, Figure 6.5). The order of these factors is as follows:

teacher recognition (school attribute)
decentralization (structural dimension)
entrepreneur (administrative behavior)
empowerment (school climate dimension)
monitor (administrative behavior)
support for school activities (school attribute)
student attentiveness (school attribute)
administrative leadership (school attribute)
spokesperson (administrative behavior)
achievement emphasis (school attribute)
cohesiveness (school climate dimension)
disturbance handler (administrative behavior)
resource allocator (administrative behavior)
commitment (school climate dimension)
negotiator (administrative behavior)
leader (administrative behavior)
formalization (structural dimension)
disseminator (administrative behavior)

figurehead (administrative behavior)

liaison (administrative behavior)

Then a profile of the mean scores of each factor for the 15 more effective schools and a similar profile for the 15 less effective schools was created using the pattern established by the central profile for the ordering of the factors.

The profiles provide for a visual representation of the alignment among the factors for each of the two groups of schools. What is striking is that the pattern of the mean scores from lowest to highest is quite similar for both groups of schools, more effective and less effective. More important, however, is that the mean scores on these factors for the more effective schools were always above the all-schools mean and those for the less effective schools were always below. Hence, to have been identified as more effective, it may be assumed that the organizational elements and the specific school attributes of these schools are in a state of coalignment or best fit.

As illustrated, there are some behaviors that teachers perceived administrators to carry out quite frequently regardless of whether they were administrators of the more effective or less effective schools. These were the figurehead and liaison behaviors of the interpersonal roles and the disseminator behaviors of the informational role. In fact, the highest mean score, overall, was obtained for the administrative liaison behaviors. This means that teachers

perceived the liaison behavior to be the one most often carried out by administrators while the entrepreneur behavior was perceived to be the least frequently carried out in both the effective and ineffective schools. However, there was still a statistically significant difference in the mean scores of all of the administrative behaviors, including those of the liaison and the entrepreneur roles.

Four factors showing the greatest range in mean scores between the more effective and less effective schools were teacher recognition, decentralization, empowerment, and support for school activities. Apparently, teachers in the more effective schools perceived that their efforts and contributions are more recognized, that they were more involved in decision making, and that they were trusted by the administrators to be creative and innovative in their work. Teachers also perceived that parents in these schools offer their support for school activities and become more involved in the school activities.

The three factors with the lowest mean scores overall were teacher recognition from the specific school attribute scales, decentralization from the administrative structure scales, and entrepreneur from the administrative behavior scales. As mentioned previously, though, there was a statistically significant difference in the mean scores of these factors between the more effective and less effective schools. Also, as already pointed out, the two factors of

teacher recognition and decentralization showed the greatest range in the mean scores between the more effective and less effective schools.

Predictors of Global Measures of Effectiveness

To answer the fifth research question which asked what factors best predict the global measures of effectiveness, it was necessary to find out which of the 20 factors identified by the factor analysis technique would best predict each of the global effectiveness measures: overall effectiveness, overall satisfaction, and school pride. The approach adopted was to use stepwise multiple regression analysis to examine the relationships between the administrative behavior, administrative structure, school climate, and specific school attribute factors; and each of the measures of overall effectiveness, overall satisfaction, and school pride. The mean scores for each of the factors were aggregated at the school level for the multiple aggression analysis. The multiple regression analyses were based on the total of all the schools responding, i.e. 43.

Overall Effectiveness Global Measure

The factors which best predict the global measure of overall effectiveness were determined by utilizing the multiple regression analysis (stepwise). Results of the

regression analysis (stepwise) are presented in Table 6.6. For this particular analysis the global measures of overall satisfaction and school pride were omitted from the regression equation.

The best predictor of overall school effectiveness was the factor, achievement emphasis, a specific school attribute. It accounted for 46% of the variance in overall effectiveness. This factor combined with the next four factors: administrative leadership, student attentiveness, commitment, and support for school activities, accounted for

Table 6.6

Results for Multiple Regression Analysis (Stepwise) for Overall Effectiveness

Factor	Beta	Simple r	Multiple R	R Square	R Square Increment
Achievement Emphasis	.68	.68	.68	.46	
Administrative Leadership	.39	.66	.74	.55	.09
Student Attentiveness	.23	.58	.77	.59	.04
Commitment	.27	.65	.79	.62	.03
Support for School Activities	.14	.60	.80	.64	.02
Empowerment	.14	.67	.80	.64	

64% of the total variance. The four additional factors supplied an increase of 18% in the overall variance and had significant correlation coefficients, ranging from .58 to .68, with the measure of overall effectiveness. The factor, empowerment (school climate scale), was identified as the sixth predictor of the overall variance for global effectiveness but it did not add significantly to the variance. Not surprisingly, four of the factors for the overall effectiveness measure out of the set of six (achievement emphasis, administrative leadership, student attentiveness, and support for school activities) were specific school attribute scales derived from section four of the questionnaire entitled "Secondary School Effectiveness Survey" by using the factor analysis technique. Of these, achievement emphasis, the most powerful predictor, is exclusive to the overall effectiveness criterion measure. It does not appear in the weighted scale of the other criterion measures of overall satisfaction and school pride.

Overall Satisfaction Global Measure

The best predictors of the global measure of overall satisfaction were also examined by using the regression analysis technique (stepwise). A summary of the regression analysis results are presented in Table 6.7. The global

measures of overall effectiveness and school pride were omitted from this regression equation.

The most powerful predictor of overall satisfaction was the factor, empowerment (school climate scale). This factor accounted for 57% of the variance in overall global satisfaction. Empowerment in combination with the next three factors: cohesiveness, student attentiveness, and administrative leadership, accounted for 61% of the total variance. These three factors contributed only 4% to the total variance, but they had significant Pearson correlation coefficients of .65, .47, and .60, respectively, with the global measure of overall satisfaction. Although included in

Table 6.7

Results for Multiple Regression Analysis (Stepwise) for Overall Satisfaction

Factor	Beta	Simple r	Multiple R	R Square	R Square Increment
Empowerment	.75	.75	.75	.57	
Cohesiveness	.19	.65	.76	.59	.02
Student Attentiveness	.14	.47	.77	.60	.01
Administrative Leadership	.09	.60	.78	.61	.01
Monitor	-.09	.42	.78	.61	

the set of important predictors of overall global satisfaction, monitor, an item of the administrative behavior scales, did not contribute significantly to the variance.

School Pride Global Measure

The global effectiveness measure of school pride was the third criterion variable to be examined by the regression analysis technique. A summary of the regression analysis results are presented in Table 6.8. The measures of overall effectiveness and overall satisfaction were omitted from this particular equation.

The factor, empowerment (school climate scale) was the best predictor of the global measure of school pride, accounting for 39% of the variance. Combined with the next three factors: student attentiveness, support for school activities, and commitment; empowerment accounted for 59% of the total variance. The three additional factors contributed an increase of 20% in the overall variance and had significant correlation coefficients of .59, .61 and .62, respectively, with the global measure of school pride. Exclusive to the set of factors predicting the global measure of school pride is teacher recognition, but this last included variable did not add significantly to the total variance.

Table 6.8

Results for Multiple Regression Analysis (Stepwise) for School Pride

Factor	Beta	Simple r	Multiple R	R Square	R Square Increment
Empowerment	.62	.62	.62	.39	
Student Attentiveness	.38	.59	.71	.50	.11
Support for School Activities	.30	.61	.75	.56	.06
Commitment	.23	.62	.76	.59	.03
Teacher Recognition	.10	.52	.77	.59	

As previously noted, empowerment, a school climate variable, was also the best predictor of the global effectiveness measure of overall satisfaction. It appears to be a powerful predictor of global effectiveness in schools.

Summary

The findings of the investigation are presented in this chapter. *t*-Tests of statistical significance were utilized to confirm statistically significant differences in mean scores of administrative behavior, administrative structure, school climate, and specific school attribute variables

between the more effective and less effective senior high schools. Profiles of the mean scores of each variable for the more effective schools and the less effective schools were also created to illustrate that there are differences between these two groups of schools. Differences were noted, for example, for the administrative behavior variables. Administrators in the more effective schools carried out the interpersonal, informational, and decisional roles behaviors more aggressively than did the administrators in the less effective schools.

Differences were indicated by the data for only the decentralization scale of administrative structure. The data show that the administrative structure of the more effective schools differed from the less effective schools in the degree to which staff members were involved in decision making activities and the degree to which power and authority is shared with staff members. In the more effective schools, the locus of control was more decentralized.

On the other hand, the level to which formalization is evident within the school's organizational structure appears to be similar for all the senior high schools. All schools adhered to certain rules and regulations necessary for the efficient operation of schools. Roles of personnel within the school were clearly defined.

The two groups of schools (more effective and less effective) differed significantly on the school climate scales of empowerment, cohesiveness, and commitment. The school climate of the more effective schools was perceived by teachers to be more positive. Results of the analysis also show that the specific effectiveness attributes: achievement emphasis, administrative leadership, support for school activities, student attentiveness, and teacher recognition, were present to a high degree in the more effective schools.

Relationships between two or more of the variables were examined by using the multivariate technique of multiple regression (stepwise) analysis to determine the factors which best predict the global measures of effectiveness. The factor which best predicted the measure of global overall effectiveness of schools was achievement emphasis, one of the five specific effectiveness attribute factors. It accounted for 46% of the overall variance. Empowerment, a school climate variable, was a powerful predictor of global effectiveness in schools, accounting for 57% of the variance in predicting global overall effectiveness, and for 39% of the variance in predicting the global measure of school pride.

CHAPTER SEVEN

DISCUSSION OF THE FINDINGS

This chapter discusses the findings of the study pertaining to the differences and similarities between the more effective and less effective senior high schools in the following catagories: (a) administrative behavior, (b) administrative structure, (c) school climate, and (d) specific school attributes. As well, the factors which best predict the global measures of effectiveness are discussed.

School Administrators in Action

Lorsch and Morse (1974) state that one way to shape many of the characteristics of organizations is through the behavior of persons in leadership positions (p. 127). This appears to be true. Corcoran and Wilson (1988) in their study of successful schools in the Secondary School Recognition Program, noted that administrators in effective schools "were a major force in initiating improvement and in encouraging, supporting, and integrating faculty initiatives" (p. 43). It appears that the administrators of the more effective schools identified in the present study were too.

At the outset of this investigation, administrative behavior, one of the three organizational elements examined, was assumed to be the driving force in establishing the coalignment or match between administrative behavior and the other organizational elements, administrative structure and school climate; and the specific school attributes. Results indicate that school administrators in the more effective schools often displayed behaviors that showed strong administrative leadership suggesting that they were influential in achieving effectiveness in their schools. Significant Pearson correlations ranging from .61 to .84 (Correlation Matrix, Appendix A) confirm the relationship between administrative behavior and administrative leadership variables.

Interpersonal Role

Although all the interpersonal role behaviors (liaison, figurehead, and leader) were frequently observed by teachers in both the more effective and less effective schools, there was a statistically significant difference in the mean scores for these behaviors between the two groups of schools. As indicated by the teachers, interpersonal skills appear to be important to achieving effectiveness. In Highett's (1989) study, parents and school superintendents also identified the necessity for school principals to have

a high level of interpersonal skills if principals were to be effective.

Mintzberg (1973) describes the liaison behavior as dealing "with the significant web of relationships the manager maintains with numerous individuals and groups outside the organization" (p. 63). He claimed that this horizontal role had been largely ignored (Mintzberg, 1973). In the present study, the significance of the liaison behaviors was evident by the high ratings that teachers in the more effective schools gave to the items in the questionnaire dealing with these behaviors. The items related to the frequency with which school administrators serve as links between the school and the community, and whether school administrators were readily accessible to parents and other members of the public. Administrators in the effective schools appear to carry out these tasks often. The liaison behavior variable was also strongly correlated with the global effectiveness measures of overall effectiveness ($r = .66$), overall satisfaction ($r = .62$), and school pride ($r = .68$) which were used to categorize the more effective and less effective schools.

Mintzberg (1973) claims that the "most basic and simple of all managerial roles is that of figurehead" (p. 59). Administrators are symbols within the schools because of the formal authority vested in them. They are obliged to perform a number of duties such as signing students' report cards,

greeting distinguished visitors to the school, attending social functions and school meetings. According to the information derived from the current study, school administrators in effective schools are highly visible persons.

According to Mintzberg (1973) the "leader role is among the most significant of all roles" (p. 61). Results of *t*-tests confirmed statistically significant differences in the mean scores of the leader behavior variable between the more effective and less effective schools. As well, comparison of the mean scores between the more effective and less effective schools indicated the greatest discrepancy for the leader behavior. In the effective schools teachers saw the administrators more often acting in their capacity as leaders. School administrators established school-wide goals and programs through staff participation, emphasized high standards of performance for students and staff, and assisted staff in finding solutions to problems.

Informational Role

The disseminator behaviors of the informational role category were the most highly rated by teachers, particularly in the more effective schools. *t*-Test results confirmed statistically significant differences for this administrative behavior between the more effective and less effective school groups. Results of the current study

support Mintzberg's (1973) claims that the sending of external information into the organization and internal information from one subordinate to another is important (p. 71). In Highett's (1989) study, parents stressed the necessity for principals to be able to communicate with all constituencies. In the present study, teachers indicated that informing staff members about proposed policy changes and parents about school activities is important.

School administrators in the more effective schools appeared to be particularly more effective in their role as spokespersons. As spokespersons, they represent the views of school staff not only to central office personnel but also to the community and the media.

Even though there were statistically significant differences for the spokesperson and monitor behaviors between the more effective and less effective schools, these behaviors, overall, were not as frequently carried out by the school administrators in either of the school groups, more effective or less effective. It may be, however, that the teachers did not know whether the school administrators were aggressive in representing teachers' views; or the teachers may have perceived incorrectly that their views were not adequately represented.

Monitoring behaviors are shown by the administrators developing procedures for monitoring student performance, ensuring that courses are articulated across the grade

levels, and monitoring the performance of staff members and providing them with feedback about their performance. Such behaviors are generally descriptive of the school administrators' role as instructional leaders within their schools (Bossert et al., 1982; Hallinger & Murphy, 1987). Results indicate that school administrators in senior high schools may need to be more aggressive in carrying out this role.

However, some researchers and scholars (Ellett & Walberg, 1979; Kroeze, 1984; Rossmiller, 1987; Pitner, 1988; Bossert, 1988) claim that most of the research fails to explain specific principal actions and the effects these actions have on the instructional organization and on student achievement. Without knowledge of these relationships, it is difficult to make an assessment of what behaviors really do make a difference. The effectiveness attributed to principal behavior may simply be due to the fact that the principal happens to be in an instructionally effective school.

Decisional Role

Mintzberg (1973) regarded decision making as the most crucial managerial activity but teachers did not give high ratings to all the items in the questionnaire within the decisional role category. Those items concerned with the entrepreneur behaviors received particularly low ratings.

Senior high schools seem to be organizations where the school administrators may not have much opportunity, or perhaps do not take the opportunity to act as initiators and designers of change, or to devise creative ways to improve the school. Perhaps school administrators feel bound by provincial and district policies which govern much of the education scene and by the curriculum which is prescribed by the provincial Department of Education; or they may feel that there is no encouragement given by the central office administration for them to engage in entrepreneurial activities; or they may simply feel there are few opportunities in education for them to do so.

Nevertheless, there was a statistically significant difference in all of the decisional role behaviors (negotiator, resource allocator, disturbance handler, and entrepreneur). As negotiators school administrators exercise diplomacy in relating to organizations and interest groups, manage decision making processes to the satisfaction of the staff members, and make their time available for consultation. In the more effective schools, teachers reported that administrators were particularly effective in this role.

Administrators in the more effective schools were seen by teachers to carry out their role as disturbance handlers more vigorously. They established rules and regulations regarding conduct, provided support for enforcement of

discipline procedures, and responded to problems with a plan for action. Another important task they carried out more effectively, as identified by the teachers, is providing resources and allocating resources to enable staff to complete instructional tasks.

Summary

Overall, results suggest that administrators in more effective schools carry out the interpersonal, informational, and decisional roles more aggressively than do administrators in the less effective schools. Analysis of the results indicates that it may be the interpersonal role behaviors of leader, the informational role behaviors of spokesperson, and the decisional role behaviors of negotiator that particularly make a difference in the more effective schools. The greatest discrepancy in the mean scores between the more effective and less effective schools occurred for these behaviors.

In his perspective on coalignment or the fitting together of the technology and task environment, Thompson (1967) spoke of administration as "a process flowing through the actions of various members spanning and linking levels" (p. 149). Corcoran and Wilson (1988) noted that "what seems to matter most is the fit between the style of the principal and the various subcultures in the school community"

(p. 43). In the present research the behaviors of the school administrators appeared to have an effect on how teachers perceived the controls of management, the type of climate, and the degree to which the specific school attributes were present.

Administrative Behavior and Administrative Structure

Peters and Waterman (1982) discussed loose-tight properties of organizational structures as being a feature of successful companies. Researchers such as Clark, Lotto, and Astuto (1984), Yin, Blank and White (1984), Firestone and Wilson (1985), and Corcoran and Wilson (1988) have spoken of similar structural features in successful schools. Corcoran and Wilson (1988) refer to this phenomena as control and discretion but they claim that so far there has been little empirical evidence gathered to support the notions of the loose-tight properties existing in the schools. In the present investigation, effective schools did exhibit loose-tight properties in their organizational structure.

Formalization is a common feature of the administrative structure in high schools according to results of the present study. Teachers in both the more effective and less effective schools gave particularly high ratings to questions dealing with this variable. Hoy et al. (1983)

observed that "formalization is one way of reducing uncertainty in bureaucratic organizations" (p. 111). This may be true for school organizations. Students generally know what to expect no matter which school they may attend. Schools are known as places to learn, and parents generally all have similar expectations when their children go to school. Students and teachers are expected to follow certain procedures in classrooms. In his discussion of organizations, Steers (1977) states that "higher degrees of formalization may be preferred in more stable, task-oriented environments" (p. 66), and school organizations are often viewed as being stable and task-oriented.

Formalization in the school organization appears to be one way of achieving control. Some of the control seen in the schools is likely due to the nature of the school organization itself. Policies appear to govern the actions of the schools. Standard procedures and official rules provide guidelines for responding to recurring situations and for decision making. When administrators act to establish a clear code of conduct and provide support for enforcement of discipline, the behavior (disturbance handler) is more strongly associated with the structural dimension of formalization ($r = .55$) than with decentralization ($r = .34$). The different roles are codified -- principal, vice/assistant principal, department head, classroom teacher -- and seem to be largely understood and

accepted by the members of the schools and the public. It is likely that no matter which senior high school is examined, similar characteristics of formalization in the organizational structure will be found. There was no significant statistical difference between the more and less effective schools on the formalization dimension of administrative structure.

On the other hand, school administrators in the more effective schools were observed to put into practice activities disclosing aspects of a decentralized structure more often than than school administrators in the less effective schools. The t-test results confirmed significant statistical differences in the mean scores of this variable between the more effective and less effective schools. Teachers observed that operational decisions were often decentralized to other units within the school, task forces and committees were used to carry out selected administrative functions, and staff members were encouraged to assume leadership for various activities. It appears that such actions enabled teachers to feel empowered ($r = .83$), satisfied with the work climate ($r = .71$), and proud of their schools ($r = .65$). This study has, therefore, added some evidence to support the claim that simultaneous loose-tight properties exist in effective schools, at least in the effective senior high schools involved in the present study.

The way that administrators manage schools appears to have a significant effect on whether teachers are satisfied overall. In the more effective schools where decentralization was a feature of the administrative structure, teachers reported a positive school climate; teachers were committed to the achieving excellence in their teaching and working together as a faculty. As previously indicated, there was a significant correlation between decentralization and the overall satisfaction indicators ($r = .71$). The decentralization variable and the climate variables of empowerment, cohesiveness, and commitment were strongly associated as is indicated by the Pearson correlation coefficients ($r = .83$), ($r. = 83$), and ($r = .59$), respectively. Hence the present study supports the work of other scholars who found decentralization to be a desirable feature of organizational structure (Mackay, 1964, Sackney, 1976, Steers, 1977).

Administrative Behavior and School Climate

Likert (1961, 1967) proposed that administrators influence the school climate, that is how the teachers, students, and others perceive and feel, and that it, in turn, influences school effectiveness. More recently, other researchers have also linked positive school climate to the effective leadership of the principal (Miskel, 1977;

Brookover et al., 1979). Corcoran and Wilson (1988) agreed that

> "[i]t was the principal who set the tone, who was the prime force for creating a positive climate for teaching and learning" and it was "typically the principal who provided the vision and the energy to create and maintain the conditions essential to success" (p.43).

Results of the current study support these findings; t-tests indicated that there are differences in school climate between the more effective and less effective schools. Teachers in the more effective schools reported a high degree of satisfaction with aspects of the work climate influenced by the school administrators which lead to empowerment, cohesiveness, and commitment. These climate dimensions are similar to three of the five dimensions that were developed by Kottkamp et al. (1987) for their OCDQ-RS climate instrument to describe the behavior of secondary teachers and principals.

The empowerment dimension in the current study was concerned with the cooperative and trusting relations between the school administrators and the teachers. It is similar to the supportive principal behavior dimension in the OCDQ-RS where the principal creates a supportive environment and encourages teacher participation and contribution. The focus of the empowerment dimension was on the relationship between the school administrators and teachers. One aspect of this relationship is the degree of trust and level of cooperation that exists between the

administrators and teachers. Another aspect is the extent to which staff members are encouraged to have an impact on decisions regarding program or policy, to be creative in carrying out their responsibilities, and to seek opportunities for improvements. A third aspect is the positive attitude of staff not only about general working conditions but also about problems which are regarded as opportunities rather than constraints. In the more effective schools, teachers particularly reported a high degree of satisfaction with these aspects.

Cohesiveness, another climate dimension in the present study, is equivalent to the intimate teacher behavior dimension designed by Kottkamp et al. (1987). These researchers (Kottkamp et al., 1987) describe intimate teacher behavior as reflecting "a strong and cohesive network of social relationships among the faculty" (p. 46). In the current research, the relationships reflective of cohesive relationships among staff members was described as follows: (a) members are made to feel part of the staff, (b) members show kindness to one another, (c) members have respect for each other, (d) unique characteristics of individual staff members are recognized, (e) there is collaboration between the staff members, (f) members share their concerns with one another, and (g) members are committed to working together as a faculty. Positive relationships among staff members appear to be important

factors in the staff members' overall satisfaction with the workplace. The correlation between the variables of cohesiveness and overall satisfaction was r = .70.

The commitment dimension of school climate in the current study can be compared to the engaged teacher behavior dimension in the OCDQ-RS (Kottkamp et al., 1987). Engaged teacher behavior is described by Kottkamp et al. (1987) as being friendly with students, dedicated to their achievement, and optimistic about their ability to succeed (p. 47). Commitment in the present study also dealt with teachers' dedication to their work and their holding high expectation for student achievement. Of the three dimensions, teachers involved in the current study rated their commitment to their work the most highly.

Lorsch and Morse's (1974) contingency theory regarding organizations and their members stressed that

> If a match between particular organizational characteristics and the demands of the organization's work are related to effective organizational performance, it is reasonable to assume that somehow this also has an impact on organization members' willingness to work toward the organization's goals (p. 3).

Corcoran and Wilson (1988) spoke of climate as being the condition of the workplace that may determine whether teachers leave or stay. This may be true as in more effective schools where there was a more positive work environment, teachers were more satisfied overall. The

measure of overall satisfaction, in particular was highly correlated with the climate dimension of empowerment ($r = .85$). The climate variables were also strong predictors of global effectiveness in schools as indicated by the regression analysis results that are discussed in the later section on predictors of global effectiveness measures in the senior high schools.

Specific School Attributes

Identified in the current research were five specific school attributes which are associated with effectiveness in secondary schools. These five attributes are achievement emphasis, support for school activities, administrative leadership, student attentiveness, and teacher recognition.

Results of the data analysis show that in the more effective senior high schools, clear academic goals are established, student assessment information is used regularly to monitor student progress, and incentive and reward systems provide recognition for student achievement. Teachers reported they were committed to achieving excellence in their teaching and related school activates. Schools achieving recognition in the Secondary School Recognition Program (Corcoran & Wilson, 1988) had made academic expectations their first priority and created structures to recognize students' achievement. It appears

that the more effective schools in the present study did too.

Data show that support for school activities was also important to achieving effectiveness. In the more effective schools, teachers reported that students participated in extracurricular activities within the school and parents provided support for the school activities. In the exemplary schools in the Corcoran and Wilson (1988) study, there was also a high degree of involvement by parents and community members in school affairs. It appears, then, that the support of the community is also a critical variable in achieving effectiveness in schools.

The link between strong administrative leadership and effectiveness in the school organization is pervasive not only throughout the results of this study, but also in many other studies concerned with effectiveness in organizations. As discussed previously, the administrative behaviors appear to be the driving force in achieving effectiveness in schools. In the Secondary School Recognition Program, leadership also played a critical role in the selected schools and the key actor was typically the principal (Corcoran & Wilson, p. 43).

Student attentiveness in the present study was strongly associated with the global measures of overall school effectiveness ($r = .67$) and school pride ($r = .73$). The notion of "orderliness" has been linked with effectiveness

in other studies on school effectiveness (Purkey & Smith, 1983; Corcoran & Wilson, 1988). It appears that students display pride in their schools by acting accordingly. Their behavior within the school is orderly and they are attentive to their studies. They also participate in school activities.

According to the data, teachers' performance was recognized and rewarded much more often in the more effective schools than in the less effective schools. Corcoran and Wilson (1988) had also noted that teachers were recognized for their achievements in the successful secondary schools. Such actions appear to be associated with teachers feeling more satisfied with the work place ($r = .73$). Hence, one way to achieve effectiveness in schools may be to make teachers feel they are valued employees.

Predictors of Global Effectiveness in Schools

The factors which best predict global measures of school effectiveness -- overall effectiveness, overall satisfaction, and school pride -- were also investigated in the present study.

Overall Effectiveness

As indicated by the results of the regression analysis (stepwise), the factor, achievement emphasis, one of the five specific school attributes, was the best predictor of the global measure of overall effectiveness. An important feature of successful schools appears to be the conviction of staff that students can be motivated to learn. The effective schools in the Secondary School Recognition Program (Corcoran & Wilson, 1988) made academic expectations a priority coupled with stronger reward systems to recognize students' accomplishments, thereby rewarding positive behavior and increasing students' motivation (pp.61-64). Similar actions were observed by teachers in the more effective senior high schools as they gave high ratings to the questionnaire items dealing with emphasis on student achievement.

Highett (1989) also found that an emphasis on students (student centeredness variable) was the best predictor of overall school effectiveness in his investigation (p. 139). This factor dealt with issues related to the satisfaction and morale of students, and the assessing and reporting procedures used by the school (Highett, 1989, p. 140).

The factor, administrative leadership, another specific school attribute, was the second most powerful predicator of overall school effectiveness. To develop a climate conducive to learning requires strong leadership by administrators to

set the tone for effective teaching and learning. Highett (1989) found in his investigation of school effectiveness that "parents were almost unanimous in their opinions that without an effective principal there could not be an effective school" (p. 141). In the present study, however, the principal and others within the school assuming leadership roles were viewed as team working together to achieve common goals. Hence, as Mortimore et al. (1989) had also found, involvement of all persons working in an administrative capacity plays a major role in the effectiveness of schools.

It seems that the behavior of students can be also equated with school effectiveness. Student attentiveness, also a specific school attribute, was the third factor predicting overall effectiveness. This factor has two foci: orderly behavior of students within the school and attentiveness of students while in class. It appears that if students feel that they are recognized and respected they respond positively to rules regulating conditions for effective learning.

The fourth factor in the set of predictor variables was commitment from the school climate scales. Overall effectiveness in schools requires commitment on the part of teachers to take an interest in their students' learning, hold high expectations for student achievement, work hard to maintain good relations with parents, look for better ways

to do their work, and take pride in their work. Such commitment is evident in a statement made to a site visitor to one of the successful secondary schools in the recognition program, "All students are pushed to achieve their maximum potential, regardless of what that potential is" (Corcoran & Wilson, 1988, p. 62). In the present study, teachers in the effective schools recognized that these important conditions existed and gave those items dealing with teacher commitment high ratings.

Although the factors, support for school activities (a specific school attribute), and empowerment (a school climate dimension), were computed by the regression analysis, these factors added minimally to the overall variance for overall effectiveness.

Overall Satisfaction

Empowerment, a dimension of school climate, was the first factor entered into the regression equation for the overall satisfaction global effectiveness measure. It was also the first factor entered for the school pride global effectiveness measure indicating that it may be a powerful predictor of school effectiveness. When teachers perceived that they were trusted and were given responsibilities and the opportunity to seek improvement in their teaching and related school activities, they appeared to be satisfied with the work climate and judged that their school was

effective overall. Johnson (1988), too, had found that the climate variable was the best predictor and the best correlate of the overall effectiveness variable.

Perhaps the answer as to why the factor, empowerment, is so powerful is illustrated by Corcoran and Wilson's (1988) description of the successful secondary schools they investigated:

> What sets these schools apart from most American secondary schools is their creative response to problems. Rather than viewing problems as constraints, many of these schools view them as opportunities. To borrow the slogan of one Plains state, these are "can do" organizations. They don't just sit back and wait for answers to appear. Rather, they aggressively search for alternative solutions (p. 66).

Such behavior on the part of school staff, as described by Corcoran and Wilson (1988), requires a sense of being able to take action, and a spirit of trust and cooperation between the teachers and the school administrators.

Cohesiveness, also a dimension of school climate, was the second factor entered in the regression equation to predict overall satisfaction. It appears that relationships among staff members are important to achieving global effectiveness in schools, at least on the overall satisfaction measure. Respect and trust appear to be vital to positive working relationships. A sense of shared purpose may lead to goals being more readily achieved.

Although three other factors were computed, student attentiveness (a specific school attribute), administrative

leadership (a specific school attribute), and monitor (an administrative behavior), these factors did not appear to contribute as significantly to the variance in predicting the global measure of overall satisfaction.

School Pride

As previously pointed out, the factor, empowerment, was also a strong predictor of school pride because it was the first variable computed by the regression analysis technique. Student attentiveness, a specific school attribute, was the second important factor to predict the global effectiveness measure, school pride. It appears that students display pride in their school by acting accordingly. Their behavior within the school is orderly and they are attentive to their studies. They also participate in school activities.

The third factor, support for school activities (a specific school attribute), contributed substantially to the variance as well. Within this factor were two foci: student participation in school activities and parental support for school activities. The support of teachers and students for all school activities appears to be crucial to achieving effectiveness.

The last factors computed by regression analysis, commitment and teacher recognition, did not contribute significantly to the variance in predicting overall

satisfaction, but nevertheless, were highly correlated with the global overall measure of school pride, r = .67 and r =. 73, respectively (Correlation Matrix, Appendix A).

Summary

Results indicate that in the effective schools school administrators establish school-wide goals, emphasize high standards of performance, make effective decisions regarding resources, and engage staff in decision making. They actively support teaching and learning within the school. They recognize the importance of their interpersonal, informational, and decisional roles as educators. Through their actions administrators appear to be influential in setting the type of atmosphere that exists within the school. Teachers indicated overall satisfaction with the working conditions in their schools when they perceived that administrators were effective role models and treated them as professionals.

Hence the assumption that school administrators are the major force in achieving effectiveness in their schools was supported by the results. When teachers perceived that the school administrators were approachable and communicative; supportive of teaching and learning, and empowered them to take initiatives and make decisions, they were satisfied

overall with the work climate. They were also proud of their schools and perceived their schools to be effective overall.

The best predictors of the global measures of effectiveness were the factors, achievement emphasis (a specific school attribute) for overall effectiveness and empowerment (a school climate dimension) for overall satisfaction and school pride.

CHAPTER EIGHT

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

In this chapter are presented an overview of the study, a summary of the findings, and conclusions based on the findings. A number of implications of the research results for theory and practice are also discussed, and suggestions are made for undertaking future research.

Overview of the Study

This study was conducted to examine the differences and similarities in administrator behavior, administrative structure, school climate, and specific school attributes between more effective and less effective senior high schools. Five research questions guided the investigation.

The sample consisted of 43 senior high schools selected to be representative of the public senior high schools in the province of Alberta. Data were aggregated at the school level.

Issues of reliability, validity, and objectivity were addressed through a number of procedures. The questionnaire used to collect information for the study was pilot tested, and the resulting data and recommendations were used in preparing the final version of the inventory. The elements

important to organizational effectiveness on which data were collected (administrative behavior, administrative structure, and school climate) are well documented in the literature on organizational effectiveness. As well, information was collected on the specific school attributes, identified in the literature on school effectiveness; namely, achievement emphasis, administrative leadership, support for school activities, student attentiveness, and teacher recognition.

The Cronbach Alpha and a Guttman Split-half analysis were performed to assess the internal reliability of the instrument, Inventory of School Operations. Results of the analysis indicated that the four parts of the instrument were highly reliable.

Quantitative data were used to examine the differences and similarities in the organizational elements and specific school attributes between the more effective and less effective schools and to guide the preparation of profiles of school mean scores on each variable associated with effectiveness for the two groups of schools.

Numerical data were analysed using descriptive and inferential statistical techniques: frequency distributions, varimax factor analysis, mean scores and rankings, Pearson correlation coefficients, regression analysis (step-wise) and t-tests of statistical significance. Factor analysis was

utilized to determine the construct validity of the scales and to reduce the number of variables.

Three global measures -- overall effectiveness, overall satisfaction, and school pride -- were used as indicators of effectiveness for categorizing schools as more or less effective. These global measures of effectiveness reflected the teachers' perceptions of overall satisfaction with the work environment, a sense of self-respect and respect for others, and delight and satisfaction with the accomplishments of the school.

First, the mean scores of each school on the global effectiveness measures were ranked. Then all schools whose mean scores were above the entire sample mean on each of the global effectiveness measures (overall effectiveness, overall satisfaction, and school pride) were categorized as more effective. Fifteen schools were in this group. Another fifteen schools whose mean scores were at or below the entire sample mean on each of the global effectiveness measures were categorized as less effective.

Correlated *t*-tests of significance were used to determine whether there was a significant difference in the mean scores of the two groups of schools for each of the factors identified by the varimax factor analysis. Profiles of the mean scores of each factor for the more effective and less effective schools were created to provide a visual representation of the data.

Regression analysis (stepwise) was used to determine the best predictors of the global effectiveness measures: overall satisfaction, overall effectiveness, and school pride. Additionally, correlation coefficients provided data on the degree of association between the variables.

Summary and Conclusions

Administrative Behavior

Research question one. What differences, if any, are there in administrative behavior between the more effective and less effective senior high schools?

Summary. Administrators in the more effective schools as compared to the less effective schools tend to be frequently engaged in carrying out the interpersonal role behaviors. As figureheads, they appear to be highly visible in the school to students and staff, and seem to be present at social and business functions which staff and/or parents attend. School administrators' leader behaviors are particularly important. As leaders, they are viewed as establishing school-wide goals and programs through staff participation, emphasizing high standards of performance for students and staff, and assisting staff members in finding solutions to problems. Administrators often carry out the

liaison behaviors where they serve as contacts between the school and the community, especially for the parent group.

Administrators in more effective schools are more apt to be engaged in the decisional role behaviors of negotiator and resource allocator. Particularly, they appear to exercise diplomacy in relating to various organizations and interest groups and manage the decision making process to the satisfaction of staff members. They seem to make appropriate decisions in allocating the school financial and physical resources, and make their time available to staff members for consultation.

School administrators, as viewed by the teachers, do not exercise the informational role behaviors as frequently as the decisional or the interpersonal role behaviors. Of these behaviors, the disseminator behaviors appear to be the ones most frequently exercised. Administrators seem to keep teachers and parents informed about policy changes and school activities. In the more effective school, especially, they were seen to act often as spokespersons for their staffs to central office administrators and the community. Teachers also indicated that the school administrators monitor teacher and student performance, and implementation of the instructional program.

The least observed behavior appears to be the entrepreneur behavior. As suggested by the data, senior high

school administrators generally do not take the initiative in proposing educational improvements.

Conclusions. There were differences in administrative behavior between the more effective and less effective senior high schools. These behaviors included the interpersonal behaviors of figurehead, leader, and liaison; the informational behaviors of disseminator, monitor, and spokesperson; and the decisional behaviors of negotiator, entrepreneur, resource allocator, and disturbance handler.

Administrative Structure

Research question two. What differences, if any, are there in administrative structure between the more effective and less effective senior high schools?

Summary. There seem to be few differences in the level of formalization of the administrative structure in Alberta schools regardless whether they are more effective or less effective. Policies and procedures which guide the operation of the school, explicit role definitions for each position in the administrative structure, and clearly defined authority relations and channels of communication appear to prevail.

However, there appear to be differences in the level of decentralization for the two school groups. What seems to be different in the more effective schools as compared to the less effective schools is that the roles of the school administrators are defined mainly in terms of providing support for teaching and learning. Certain administrative functions and operational decisions appear to be decentralized to other units or groups such as committees or task forces. Staff members are encouraged to take the initiative in engaging in leadership-type activities and to contribute to school policy decisions.

Conclusions. There were no differences in the level of formalization of the administrative structure between the more effective and less effective senior high schools.

There were differences in the level of decentralization of the administrative structure between the more effective and less effective senior high schools.

School Climate

Research question three. What differences, if any, are there in school climate between the more effective and less effective senior high schools?

Summary. In the more effective senior high schools, teachers reported that the school climate is warm, friendly, and positive. Particularly, teachers felt empowered to take the initiative in seeking excellence. The relations between the school administrators and staff members appear to be one of cooperation and trust. Teachers also felt they were included in decision making, encouraged to be creative in carrying out their responsibilities, and have opportunities available to them for professional growth and improvement. The teachers expressed enthusiasm for their work and said they were committed to their work. They held high expectations for student achievement and worked hard to maintain good relations with parents. Problems appear to be regarded by both administrators and teachers as opportunities to seek improvements.

There seems to be cohesiveness among the members of staff. In the more effective schools, one is likely to see teachers show respect and kindness to one another, recognize unique characteristics of individual staff members, and make new members feel part of the group. There seems to be collaboration among all members of the staff and commitment to working together as a team.

Conclusions. There were differences in school climate between the more effective and less effective senior high

schools. Differences were noted for the climate dimensions of commitment, cohesiveness, and empowerment.

Specific School Attributes

Research question four. What differences, if any, are there in specific school attributes between the more effective and less effective senior high schools?

Summary. In those schools identified as the more effective schools administrators provide strong leadership. There seems to be considerable emphasis on recognizing and rewarding the work that teachers do. Student behavior appears to be orderly. School administrators ensure that there are few disruptions to distract student attention and that school activities are supported by students and parents.

In the more effective schools there appears to be emphasis placed on student achievement. Clear academic goals are likely to be formulated, and incentive and reward systems established to provide for recognition of student achievement. Students are viewed as achieving to their potential whatever that potential may be. Teachers reported they used assessment information to monitor student progress. They appear to be committed to achieving excellence in their teaching and related school activities.

Overall, in the schools categorized as effective in this study, teachers perceived their schools to be effective and they were satisfied with the working conditions in the schools. Students and teachers seem to take pride in their schools.

Conclusions. There were differences in specific effectiveness attributes between the more effective and less effective senior high schools. These effectiveness attributes were the following: achievement emphasis, administrative leadership, support for school activities, student attentiveness, and teacher recognition.

Factors Predicting Global Effectiveness

Research question five. What factors are the best predictors of global measures of effectiveness in senior high schools?

Summary. Of the factors entered into the regression equation for global overall effectiveness, it was achievement emphasis, a specific school attribute, that was the best predictor. The next best predictor was administrative leadership, also a specific school attribute. Other factors identified by the regression equation as contributing to the variance in predicting global overall

effectiveness were student attentiveness, a specific school attribute; commitment, a school climate dimension; support for school activities, a specific school attribute; and empowerment, a school climate dimension, respectively. However, the last three factors contributed only minimally to the variance.

The factors in order of entry into the regression analysis for the global measure of overall satisfaction were empowerment, a school climate dimension; cohesiveness, a school climate dimension; student attentiveness, a specific school attribute; administrative leadership, a specific school attribute; and monitor, an administrative behavior. Empowerment, a dimension of school climate, was, therefore, the best predictor of the overall satisfaction global measure. The other factors contributed minimally to the variance.

According to results of the regression analysis, the factors empowerment, a school climate dimension; student attentiveness, a specific school attribute; support for school activities, a specific school attribute; commitment, a school climate dimension; and teacher recognition, a specific school attribute, in that order, were identified as best predictors of the global measure of school pride. Of these, the first three factors, empowerment, student attentiveness, and support for school activities were important predictors of the global measure of school pride

contributing a total of 56% of the variance. The other factors entered into the equation contributed minimally to the variance.

Conclusions. The factor, achievement emphasis, a specific school attribute, was the best predictor of the global measure of overall effectiveness.

The factor, empowerment, a dimension of school climate, was the best predictor of the global measure of overall satisfaction.

The factor, empowerment, a dimension of school climate, was also the best predictor of the global measure of school pride.

Implications

Theoretical Implications

The conceptual framework for the study was based on a multidimensional approach to assessing organizational effectiveness which recognizes multiple indicators of effectiveness. Specifically, Ratsoy's (1983) and Kotter's (1978) multidimensional models served as guides in designing the study.

Ratsoy's (1983) model was useful in identifying variables which could be included in a comprehensive approach to assessing effectiveness in schools. However,

using a multidimensional approach means a high cost expended in "time, effort, and funds" (Ratsoy, 1983, p. 5). Ratsoy (1983) addressed this problem when he discussed planning for organizational effectiveness assessment but he also emphasized that the "principle of parsimony should be a guide in selecting effectiveness variables for inclusion" (Ratsoy, 1983, p. 5). Considering this advice, the number of variables was tailored to meet the specific purposes of assessment in the current research. Nevertheless, contributions of time and effort were particularly high in the process of collecting, collating, and analysing the data for the twenty three variables.

In addition to focussing on multiple effectiveness indicators, Kotter's (1978) model also provided a perspective on how an organization can attain a high level of effectiveness. According to Kotter (1978),

> to attain a high level of effectiveness, an organization must use its limited resources successfully in three ways: (1) to make sure, in the short run, that the key organizational processes stay in an effective and efficient state; (2) to create or maintain a coalignment among the six structural elements; and (3) to push its structural elements into, or maintain them in, highly adaptive states (p. 69).

Hence, Kotter's model served to highlight not only effectiveness indicators to be considered, but also the types of actions to be examined among elements in the school organization. One important implication of the model for managers and administrators is that a good understanding of

the complexity of modern organizations is necessary for achieving effectiveness.

Kotter (1978) claims that the key processes and all six structural elements identified in the model need to be examined in order to deduce whether an organization is effective (p. 67). The present study focussed only on the fit or coalignment of three structural elements (administrative behavior, administrative structure, and school climate) of the school organization at the time that data were collected. Examining other elements such as the external environment of the school and the school's technology would also be beneficial to the study of school effectiveness. As well, assessment on an ongoing or long-term basis would monitor the school activities and provide data on the adaptability of the organizational elements, which Kotter (1978) says is necessary in order to maintain an effective state. The structural nature, administrative practices, and organizational climate of schools could be enhanced through longitudinal assessment which monitor changes.

Kotter's (1978) model is complex, however. Kotter (1978) aknowledges that one of the barriers to achieving organizational effectiveness is that the amount of information obtained from using the seven different elements (key processes and six structural elements) results in a complexity of issues to be considered for decision making

(p. 69). To the researcher, use of Kotter's (1978) model, without modification, also presents a challenge in developing a viable research design.

Although the major benefit of Ratsoy's (1983) and Kotter's (1978) models is in developing a comprehensive approach to assessing organizational effectiveness, the effectiveness indicators composing their models are broad categories which need to be broken down further in order to establish specific areas for assessment. Hence, the researcher must be aware that such elaboration establishes more indicator categories. In the present study, for example, the administrative behavior category yielded ten further categories to be considered in examining the behavior of school administrators.

A disadvantage of using multiple indicators is that they may be in conflict with one another. An example is the apparent conflict of the loose-tight qualities of administrative structure reported to be present in effective schools.

The major theoretical issues in assessing organizational effectiveness stems from the apparent ambiguity surrounding the construct of effectiveness. Perhaps the most useful way to clarify effectiveness is to distinguish between effective and ineffective organizations. In the current study the more effective and less effective senior high schools were categorized on three global

effectiveness measures and were distinguished by the differences and similarities in the selected organizational elements and specific school attributes.

A study by Highett (1989) also examined school effectiveness and ineffectiveness through the perspectives of parents, principals, and superintendents. By following such programmatic lines of inquiry, as was suggested by Hoy and Ferguson (1985), researchers may eventually attain a general consensus for the definition of effectiveness.

Implications for Practice

Administration is dealing with people, and the need for school administrators to have strong interpersonal skills was borne out by this study. Teachers in all of the schools surveyed gave the liaison, figurehead, and leader behaviors of the interpersonal role and the negotiator behaviors of the informational role high scores. They saw administrators as being involved in interaction with other people. Statistically significant differences in these administrative behaviors were found between the more effective and less effective schools when the scale scores for these behaviors were compared.

It is, therefore, essential that those who occupy administrative positions be able to deal effectively with human needs, particularly the individual needs of those who work in the school. Administrative authority and control are

apparently not diminished by showing concern for the individual needs of staff members; rather these qualities are enhanced by the ability of the administrator to effectively support, encourage, and foster personal and professional growth. Teachers were highly satisfied with the work place when they were involved in decisions affecting the operation of the school. Since administrators appear to make important contributions to school effectiveness, criteria regarding administrative behaviors and style of management could become the basis for selecting school administrators.

With public pressures for accountability for the financial resources spent on education, school districts are spending increasing funds on evaluation programs which include appraising administrators. Findings from research such as this one may be useful for designing appraisal procedures. An assessment profile of the school administrator's strengths and weaknesses may assist the administrator in improving on behaviors that lead to effectiveness, especially, if the function of the evaluation is formative.

In the province of Alberta, the role of the school principal has been given prominence by its inclusion for the first time in Bill 27, the new School Act (Minister of Education, 1988). The Act specifies the duties of the school. One of these is that the principal must provide

instructional leadership in the school (Minister of Education, Bill 27, School Act, p. 14). Rowan et al. (1983) alerted researchers and practitioners that other organization members would have to assume administrative duties if principals were to engage in instructional management. Results of this study point to the effectiveness of designating certain other units within the school to assume some of the administrative functions, thus making more time available to administrators to assume the duties of instructional leadership. Teachers gave high ratings to overall satisfaction with the workplace when they reported a high level of decentralization within the school.

Teachers' satisfaction with the workplace apparently leads to a positive school climate. In turn, as other researchers have also pointed out (Dwyer et al., 1983; Mortimore & Sammons, 1987; Miskel, 1977, Corcoran & Wilson, 1988), a positive school climate is associated with positive student outcomes and teachers' positive perceptions of the principal' effective performance. In this light, administrators, school building as well as central office, could attempt to provide a work environment which contributes to the job satisfaction of the staff members. District policies such as the policies governing the provision of funds for professional improvement may have an effect on the job satisfaction of teachers. Questionnaires, for example, can serve as an instrument to look at the job

satisfaction of teachers and also as an expression of administrative interest in the well-being of the school staff.

Local policy makers should also examine their policies and practices regarding rewards and incentives for teachers. In the more effective schools there seems to be more effort to recognize the work that teachers do. Overall, however, there appear to be few activities designed to recognize the achievement of teachers. Giles (1987), in his study of organizational effectiveness and culture in a school district, also found that the efforts of teachers are seldom recognized. He listed a number of suggestions given by the educators involved in his study that could rectify the situation. These include getting a personalized letter from the superintendent, merit pay, awards, more staff promotion within the district, and simply getting together more with the central office administrators on an informal basis (Giles, 1987, p. 202).

Most of these suggestions could be easily instituted. Corcoran and Wilson (1988), in their study of successful schools, found that "schools in the recognition program often used multiple forms of recognition, both formal and informal" (p. 53). The teachers in their study indicated that recognition, especially by one's peers, leads to sustained success. It appears, then, that teacher

recognition programs should become part of the policy makers' and school administrators' agendas.

Findings from organizational effectiveness studies have drawn attention to a comprehensive focus if a change toward achieving effectiveness is to be fully addressed. Educational policy making could take into account the multidimensional perspective of schools, i.e. the effect of environmental influences as well as the organizational elements within the school that comprise schools as social organizations. For example, parental support appears to be associated with effectiveness in schools and, therefore, should be cultivated. Statistically significant differences between the more effective and less effective senior high schools on the variable of parental support for school activities was supported by the data in the present study. It appears that sharing information about the school with the community elicits support, helps to develop a shared vision for the school, and builds pride.

Striving to promote and advertise indicators of success such as a caring, supportive climate may attract students and, thereby, financial support for the school. It seems that students will stay in school if they are happy there. Corcoran and Wilson (1988) found that

> Students in the nation's schools are three-and one-half times more likely to drop out of school than students in the recognition schools. A clear message is being sent to students by these schools --they care about them and are doing everything

> possible to maintain programs that meet the diverse needs of their student population (p.17).

Havelock (1973) stated that one responsibility of the executive leadership of an organization is changing the system so that it performs much better (p. ix). But implementing new instructional programs or changing the organizational structure of the educational system, for example, can create a climate of resistance and instability. Hence, efforts by provincial or local policy makers to enhance the effectiveness of schools should take into account the repercussions of change in the educational system on school administrators, instructional practice, and attitudes of the personnel throughout and beyond the school setting. It seems that cultivating high morale, staff satisfaction, and trusting and caring relationships between the members of the school organization appear to be important to effecting change, and achieving and maintaining effectiveness.

Implications for Research

The current study has potential to contribute to further investigations regarding the effectiveness of senior high schools. This study has provided a macro perspective of the characteristics of an effective senior high school. There is a need for a micro perspective on the senior high school as an effective organization to provide more detailed evidence of precisely which administrative behaviors

influence the school instructional program and the linkages which may affect student achievement. As Rossmiller (1987) points out in his review of studies focussing on leadership, researchers have not yet traced linkages between the attributes of school principals and the achievement of students in their schools. The questions of whether and how school administrators directly or indirectly influence student achievement still require answers.

Comparative studies of administrative behavior in the elementary and secondary schools also should be carried out. It appears that many of the effectiveness attributes investigated in this study on senior high schools are also common to elementary schools; such as, strong administrative leadership, a positive school climate, and an emphasis on student achievement. Mortimore et al. (1989), for example, identified 12 factors in their study of effective junior schools which included such factors as purposeful leadership, involvement of teachers, structured sessions, work centered environment, parental involvement, and positive school climate, among others (pp. 765-766). However, the precise differences, if any, in how these indicators are effected at each level by school administrators are not yet documented as a body of knowledge. Pitner (1988, p. 109) called for a longitudinal study on the effect of leaders on organizations. This call remains important because there is a need to establish

causality and the effects of the administrative action in both elementary and secondary schools.

The studies of effective schools and, particularly that of effective school leadership, have implications for research and instruction in university departments. Such studies may inform the design and development of preparation programs for educational administrators. The current research, for example, has highlighted desirable administrative behaviors and administrative structures for the senior high schools.

There also remains a need to examine school effectiveness from a variety of constituent perspectives. In this study, data were obtained from the teachers of the senior high schools involved in the study. Students, parents, and administrators were not surveyed. Information from these constituencies may contribute to the further understanding of effectiveness in senior high schools.

Schools, as all organizations, must adapt and respond to change. It is through continued research efforts to find out what it is that school administrators must do to initiate and maintain effectiveness in the school they manage that answers will be found to achieve excellence. Flexibility was seen by Thompson (1967) as an important ingredient in the administrative function in achieving excellence. Continued research efforts can monitor the behaviors of school administrators that initiate and

maintain effectiveness as schools move into the twenty-first century.

Concluding Remarks

The purpose for assessing effectiveness in schools appears to be simple: to gain meaningful results which will delineate effectiveness. However, effectiveness as a construct is difficult to measure and continues to be fraught with theoretical, methodological, and measurement issues. There is a common concern that research regarding organizational effectiveness, particularly at the school level, is fragmented. As noted in the introduction to the study, research on organizational effectiveness has been criticized for the piecemeal, non-cumulative manner in which it has been conducted. The current study was a contribution to the systematic advancement of knowledge about school effectiveness within a multidimensional theoretical perspective.

This study has also replicated the findings from the extensive study carried out by Corcoran and Wilson (1988) on the successful secondary schools which were recognized in the United States. In this sense, this study helps to advance knowledge in cumulative fashion of the senior high school as an effective organization. The specific school attributes contributing to the success of senior high

schools in Alberta were similar to those found by Corcoran and Wilson (1988). There is an emphasis on student achievement, evidence of strong administrative leadership, parental support and involvement in school activities, attentive and orderly student behavior, and recognition of the work that teachers do.

Corcoran and Wilson (1988) discovered that it was usually the principal who was the prime force in creating a positive climate for teaching and learning. The results of this study also suggest that it is the school administrators who are the initiators or driving force in creating the conditions which lead to effectiveness in senior high schools.

Practitioners need guidelines to achieve effectiveness in the schools now and in the future. Research efforts to increase understandings of the relationships and linkages between administrative behaviors and other elements of the school organization should continue.

REFERENCES

Alberta Education. (1984). *Program policy manual* (2nd ed.). Edmonton, AB: Alberta Education.

Allison, D. J. (1983). Toward an improved understanding of the organizational nature of schools. *Educational Administration Quarterly*, 19 (4), 7-34.

Anderson, J. C. (1968). *Bureaucracy in education*. Baltimore: The John Hopkins Press.

Andrews, R. L. (1987). *School self-assessment instruments*. An Effective Schools Project. Seattle: University of Washington, College of Education.

Averch, H. A., Carroll, S. J., Donaldson, T. S., Keisling, H. J., & Pincus, J. (1972). *How effective is schooling? A critical review and synthesis of research findings*. Santa Monica: The Rand Corporation.

Bidwell, C. E., & Kasarda, J. D. (1975). School district organization and student achievement. *American Sociological Review*. 40, 55-70.

Borg, W. R. and Gall, M. D. (1983). *Educational research an introduction*. New York: Longman.

Bossert, S.T. (1988). School effects. In N. Boyan (Ed.), *The handbook of research on educational administration* (pp. 341-352). New York: Longman.

Bossert, S., Dwyer, D., Rowan, B., & Lee, G. (1982). The instructional management role of the principal. *Educational Administration Quarterly*, 18, 34-64.

Boyer, E. L. (1984). Clarifying the missions of the American high school. *Educational Leadership*, 41(6), 20-23.

Brandt, R. (1987). On leadership and student achievement: A conversation with Richard Andrews. *Educational Leadership*, 45 (1), 9-16.

Brookover, W., Beady, C., Flood, P., Schweitzer, J., & Wisenbaker, J. (1979). *School social systems and student achievement: Schools can make a difference*. New York: Praeger.

Burrell, G., & Morgan, G. (1979). *Sociological paradigms and organizational analysis*. London: Heinemann.

Cameron K. (1980). Critical dimensions in assessing organizational effectiveness. *Organizational Dynamics*. Amacom: A Division of American Management Associations. Autumn, 66-80.

Cameron, K. S., & Whetten, D. A. (Eds.). (1983). *Organizational effectiveness a comparison of multiple models*. Orlando: Academic Press.

Campbell, R. F. et al. (1977). *Introduction to educational administration*. (5th ed.). Toronto: Allyn & Bacon.

Clark, D. L., Lotto, L. S., & Astuto, T. A. (1984). Effective schools and school improvement: A comparative analysis of two lines on inquiry. *Educational Administration Quarterly*, 20 (3), 41-68.

Cohen, M. (1983). Instructional, management, and social conditions in effective schools. In E.L. Odden & A. Webb (Eds). *School finance and school improvement*. Cambridge: Ballinger.

Corcoran, T. B., & Wilson, B. L. (1988). *The search for successful secondary schools the first three years of the secondary school recognition program*. First printed, 1986. Revised and Reprinted, 1988. Philadelphia: Research for Better Schools.

Cotton, K., & Savard, W. G. (1980). *The principal as instructional leader. Research on school effectiveness project: Topic summary report*. Portland: Northwest Regional Educational Laboratory. (ERIC Service Reproduction Service No.ED 214 702).

Dwyer, D. C., et al. (1983). *Five principals in action: perspectives on instructional management*. San Francisco: Far West Laboratory for Educational Research and Development.(ERIC Reproduction Service No. ED 231 085).

Edmonds, R. R. (1979). Effective schools for the urban poor. *Educational Leadership*, 37(1), 15-24.

Edmonds, R. R. (1981). Making schools effective. *Social Policy*, 12, 56-60.

Ellett, C.D., & Walberg, H.J. (1979). Principals' competency, environment and outcomes. In H.J. Walberg (Ed.), *Educational environments and effects evaluation, policy and productivity (140-164)*. Berkeley: McCutchan.

Firestone, W. A., & Herriott, R. E. (1982). Two images of schools as organization: An explication and illustrative empirical test. *Educational Administration Quarterly*, 18(2), 39-59.

Firestone, W. A., & Wilson, B. L. (1985). Using bureacratic and cultural linkages to improve instruction: The principal's contribution. *Education Administration Quarterly*, 21(2), 7-30.

Firestone, W. A., & Wilson, B. L. (1986). *Management and organizational outcomes: The effects of approach and environment in schools*. Report prepared for Applied Research Project, January, 1986. Philadelphia, PA: Research for Better Schools.

Giles, K. A. (1987). *An exploratory analysis of organizational effectiveness and culture in a school district*. Unpublished doctoral dissertation, University of Alberta.

Glasman, N. S., & Biniaminov, I. (1981). Input-output analysis of schools. *Review of Educational Research*, 51, 509-539.

Goodman, P. S., & Pennings, J. M. (Eds.). (1977). *New perspectives on organizational effectiveness*. San Francisco: Jossey-Bass.

Gross, N., & Herriott, R. E. (1965). *Staff leadership in public schools: A sociological inquiry*. New York: Wiley.

Gunn, J. A. (1984). *Job satisfaction of senior high school principals and their perceptions of school effectiveness, their leadership, and their bases of influence*. Unpublished doctoral dissertation, University of Alberta.

Hallinger, P., & Murphy. J. (1985). Assessing the instructional leadership behavior of principals. *The Elementary School Journal*, 86 (2), 217-248.

Hallinger P., & Murphy, J. (1987). Assessing and developing principal instructional behavior. *Educational Leadership*, 45 (1), 54-61.

Halpin, A. W., & Croft, D. B. (1962). *The organizational climate of schools*. Washington, DC: U.S. Office of Education, Research Project. Contract #SAE 543-8639, August.

Harrison, M. I. (1987). *Diagnosing organizations methods, models, and processes*. Beverly Hills: Sage.

Havelock, R. G. (1973). *The change agent's guide to innovation in education*. Englewood Cliffs, N.J.: Educational Technology Publications.

Hemphill, J. K., Griffiths, D. E., & Frederikson, N. (1962). *Administrative performance and personality*. New York: Teachers College, Columbia University.

Highett, N. T. (1989). *School effectiveness and ineffectiveness: parents', principals' and superintendents' perspectives*. Unpublished doctoral dissertation, The University of Alberta.

Holdaway, E.A. (1978) Facet and overall satisfaction of teachers. *Educational Administration Quarterly*, 14 (1), 30-47.

Hoy, W. K. (1982) Recent developments in theory and research in educational administration. *Education Administration Quarterly*. 18 (3), 1-11.

Hoy, W. K., Blazowsky, R., & Newland, W. (1983). Bureaucracy and alienation: A comparative analysis. *The Journal of Educational Administration*, XXI(2), 109-120.

Hoy, W. K., & Ferguson, J. (1985). A theoretical framework and exploration of organizational effectiveness of schools. *Education Administration Quarterly*. 21 (2), 117-134.

Hoy, W. K., & Miskel, C. G. (1987). *Educational administration: Theory, research, and practice* (3rd ed.). New York: Random House. Hoy, W. W. (1982). Recent developments in theory and research in educational administration. *Education Administration Quarterly*. 18 (3), 1-11.

Immegart, G. L., & Pelecki, F. J. (1973). *An introduction to systems for the educational administrator*. Reading, Mass.: Addison-Wesley.

Johnson, N.A. (1988) *Perceptions of effectiveness and principals' job satisfaction in elementary schools*. Unpublished doctoral dissertation, The University of Alberta.

Keeler, B. T. (1961). *Dimensions of the leader behavior of principals, staff morale, and productivity*. Unpublished doctoral dissertation, The University of Alberta.

Kotter, J. P. (1978). *Organizational dynamics: Diagnosis and intervention*. Reading, Mass.: Addison-Wesley.

Kottkamp, R. B., Mulhearn, J. A., & Hoy, W. K. (1987). Secondary school climate: A revision of the OCDQ. *Educational Administration Quarterly*, 23(3), 31-48.

Kroeze, D.J. (1984). Effective principals as instructional leaders: New directions for research. *Administrators Notebook*. The University of Chicago, Midwest Administration Center, XXX (9).

Lawler III, E. E., Nadler, D. A., and Camman, C. (1980). *Organizational assessment*. New York: John Wiley

Lawrence, P. R., & Lorsch, J. W. (1967). *Organization and environment managing differentiation and integration*. Boston: Harvard Graduate School of Business Administration.

Leithwood, K., & Montgomery, D. (1982). The role of the elementary school principal in program improvements. *Review of Educational Research*, 12, 309-339.

Likert, R. (1961). *New patterns of management*. New York: McGraw-Hill.

Likert, R. (1967) *The human organization*. New York: McGraw-Hill.

Likert, J. G., & Likert, R. (1971). *Profile of a school*. Ann Arbor, MI: Rensis Likert Associates.

Lorsch, J. W. and Morse, J. J. (1974). *Organizations and their members: a continency approach*. New York: Harper and Row.

MacKay, D. A. (1964). *An empirical study of bureaucratic dimensions and their relations to other characteristics of school organization*. Unpublished doctoral dissertation, University of Alberta.

MacPhail-Wilcox, B., & King, R. A. (1986). Production function revisited in the context of educational reform. *Journal of Education Finance*, 12 (4), Fall, 191-222.

Madaus, G. F., Airasian, P. W., & Kellaghan, T. (1980). *School assessment a reassessment of the evidence*. New York: McGraw Hill.

March, J. G., & Simon, H. A. (1963). *Organizations*. New York: John Wiley.

Mazzarella, J. A. (1985). *The effective high school principal: sketches for a portrait*. Washingtion, D.C.: National Institute of Education. (ERIC Reproduction Service No. ED 256 066).

McDaniel, T. R. (1984) In search of educational excellence. *Principal*, 64 (2), 14-16.

Meyer, J., Scott, W. R., and Deal, T. (1983). Research on school and district organization. In Baldridge, J.V., and Deal, T.(Eds.). *The dynamics of organizational change in education*. Berkely, Calif.: McCutchan.

Miller, R., Smey-Richman, B., Woods-Houston, M. (1987). *Secondary schools and central office: Partners for improvement*. Philadelphia, PA: Research for Better Schools.

Minister of Education. (1988). *Bill 27, school act*. Legislative Assembly of Alberta, Canada.

Mintzberg, H. (1973). *The nature of managerial work*. New York: Harper and Row.

Mintzberg, H. (1979). *The structuring of organizations*. Englewood Cliffs: Prentice-Hall.

Miskel, C. G. (1977). Principals' perceived effectiveness, innovation effort, and the school situation. *Education Administration Quarterly*, 13 (1), Winter, 31-46.

Mortimore et al. (1989). A study of effective junior schools. *International Journal of Educational Research*, 13 (7), 753-768.

Mortimore, P., & Sammons, P. (1987). New evidence on effective elementary schools. *Educational Leadership*, 45(1), 4-8.

Mott, P. E. (1972). *The characteristics of effective organizations*. New York: Harper & Row.

National Education Association. (1986). *The role of the principal in effective schools what research says about series*, Number 4, Data Search Reports. Washington, D.C.: N.E.A., Research Division. (ERIC Reproduction Service No. ED 274 083).

Payne, D. A., Ellett, C. D., Perkins, M. L., Klein, A. E., & Shellenberger, S. (1975). *The verification and validation of principal competencies and performance indicators: assessment design, procedures, instrumentation, field tests results*. Final project Report, Vol. 1. Athens: Georgia Department of Education and College of Education, University of Georgia.

Peters, T., & Waterman, R. H., Jr. (1982). *In search of excellence: The leadership difference*. New York: Random House.

Pitner, N. J. (1988). The study of administrator effects and effectiveness. In N.Boyan (Ed.), *The handbook of research on educational administration*. New York: Longman.

Purkey, S. C., & Smith, M. S. (1983). Effective schools: A review. *Elementary School Journal*, 83, 427-453.

Ratsoy, E. W. (1983). Assessing effectiveness in educational organizations. *The Canadian Administrator*, XXIII (3).

Ratsoy, E. W., & Miklos, E. (1984). *Administrative effectiveness in the Medicine Hat public school district* (Studies in Administrative Effectiveness No.1). Edmonton, Alberta: University of Alberta, Department of Educational Administration.

Ratsoy, E. W., & Miklos, E. (1985). *Developing instruments to assess school district effectiveness* (Studies in Administrative Effectiveness No. 2). Edmonton, Alberta: University of Alberta, Department of Educational Administration.

Research Action Brief. (1980). *Principal evaluation*. ERIC Clearing House on Educational Management, 12, September.

Rosenholtz, S. J. (1985). Effective schools: Interpreting the evidence. *American Journal of Education*, 93(3), 352-388.

Rossmiller, R. A. (1987). Achieving equity and efficiency in schooling. *Journal of Education Finance*, 12, Spring, 561-577.

Rowan, B., Bossert, S. T., & Dwyer, D. C. (1983). Research on effective schools: A cautionary note. *Educational Researcher*, 12(4), 24-31.

Russell, J. S., Mazzerella, J. A., White, T., & Maurer, S. (1985). *Linking the behaviors and activities of secondary school principals to school effectiveness: A focus on effective and ineffective behaviors.* (ERIC Reproduction Service No. ED 258 322).

Sackney, L. E. (1976). *The relationship between organizational structure and behavior in secondary schools.* Unpublished doctoral dissertation, University of Alberta.

Sander, B., & Wiggins, S. (1985). Cultural context of administrative theory: In consideration of a multidimensional paradigm. *Education Administration Quarterly*, 21 (1), 95-117.

Scott, W. R. (1981). *Organization rational, natural and open systems.* New Jersey: Prentice-Hall.

Scott, W. R. (1987). *Organizations rational, natural , and open systems.* (2nd ed.). Englewood Cliffs: Prentice Hall.

Seashore, S. E. (1983). A framework for an integrated model of organizational effectiveness. In K.S. Cameron & D.A. Whetten (Eds.), *Organizational effectiveness a comparison of multiple models (pp. 55-70).* Orlando: Academic Press.

Sergiovanni, T. J. (1966). Factors which affect satisfaction and dissatisfaction of teachers. *Journal of Educational Administration*, 5(1). 66-82.

Sergiovanni, T. J. (1968). New evidence on teacher morale: A proposal for staff differentiation. *The North Central Association Quarterly*, 62(3), 259-266.

Sergiovanni, T. J. (1987). *The principalship a reflective practice perspective.* Newton: Mass.: Allyn and Bacon.

Spady, W. G. (1973). The impact of school resources on students. In F. Kerlinger (Ed.). *Review of research in education.* Itasca,Il.: Peacock.

Steers, R. M. (1975). Problems in the measurement of organizational effectiveness. *Administrative Science Quarterly.* 20, December, 546-558.

Steers, R. M. (1977). *Organizational effectiveness: a behavioral view.* Santa Monica: Goodyear.

Sweeny, J. (1982). Research synthesis on effective school leadership. *Educational Leadership*, 39 (5), 346-352.

Taguiri, R. (1968). The concept of organizational climate. In R. Taguiri & G.H. Letwin (Eds.), *Organizational climate explorations of a concept*. Boston: Harvard University.

Thompson, J. D. (1967). *Organizations in action*. New York: McGraw Hill.

Weick, K. E. (1976). Educational organizations as loosely-coupled systems. *Administrative Science Quarterly*. 21, March.

Williamson, J. B., Karp, D. A., & Dalphin, J. R. (1977). *The research craft an introduction to social science methods*. Boston: Little, Brown and Company.

Willower, D. J., Eidell, T. I., & Hoy, W. K. (1967). *The school and pupil control ideology*. Penn State Studies No. 24. Pennsylvannia: Pennsylvannia State University Press.

Wilson, W. A., & Firestone, B. L. (1987). The principal and instruction: Combining bureaucratic and cultural linkages. *Educational Leadership*. 45 (1), 18-23.

Wilson, B. L., Firestone, W. A., & Herriott, R.E. (1985). *School assessment survey information for improvement*. Philadelphia, PA: Research for Better Schools.

Wood, F. H., Johnson, G., & Paden, J. (1984). Will this new round of recommendations for high schools make a difference? *Educational Leadership*, 41(6) 69-72.

Woodward, J. (1965). *Industrial organization: Theory and Practice*. London: Oxford University Press.

Van de Ven, A. H., & Ferry, D. (1980). *Measuring and assessing organizations*. New York: Wiley.

Yin, R. K., Blank, R. K., & White, J. L. (1984). *Excellence in urban high schools: An emerging district/school perspective*. Washington, DC: Cosmos Corporation.

APPENDIX A

Correlation Matrix

Correlation Matrix

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.00																						
2	** .73	1.00																					
3	** .83	** .80	1.00																				
4	** .68	** .56	** .72	1.00																			
5	** .55	** .69	** .68	** .67	1.00																		
6	** .65	** .51	** .79	** .58	** .41	1.00																	
7	** .72	** .69	** .79	** .72	** .75	** .64	1.00																
8	** .70	** .52	** .70	** .65	** .61	** .63	** .76	1.00															
9	** .55	** .46	** .64	** .39	* .31	** .52	** .51	** .42	1.00														
10	** .67	** .53	** .72	** .52	** .50	** .67	** .64	** .60	* .35	1.00													
11	** .41	.17	** .41	** .52	.10	** .46	* .31	** .46	** .55	.27	1.00												
12	** .69	** .54	** .71	** .78	** .72	** .52	** .79	** .71	** .34	** .58	** .43	1.00											
13	** .60	** .38	** .60	** .49	** .44	** .45	** .52	** .53	** .36	** .55	.27	** .59	1.00										
14	** .47	** .40	** .46	** .45	** .56	** .35	** .59	** .55	.17	** .52	.05	** .61	** .79	1.00									
15	** .69	** .63	** .74	** .69	** .77	** .50	** .82	** .71	** .40	** .64	.25	** .83	** .75	** .82	1.00								
16	** .69	** .46	** .70	** .51	** .44	** .54	** .53	** .48	** .51	** .49	* .38	** .58	** .85	** .54	** .65	1.00							
17	** .80	** .64	** .84	** .68	** .61	** .78	** .80	** .67	** .68	** .73	** .55	** .68	** .63	** .52	** .73	** .68	1.00						
18	** .70	** .51	** .66	** .52	** .53	** .47	** .60	** .55	** .39	** .49	.20	** .52	** .67	** .45	** .60	** .79	** .60	1.00					
19	** .65	** .41	** .58	** .37	.27	** .52	** .42	* .35	** .61	** .37	** .37	** .37	** .55	.29	** .44	** .69	** .64	** .51	1.00				
20	** .55	* .35	** .58	** .45	* .36	** .49	** .61	** .56	** .39	** .44	.17	** .59	** .63	** .65	** .74	** .56	** .57	** .48	** .42	1.00			
21	** .66	** .46	** .65	** .61	** .49	** .55	** .64	** .49	** .48	** .51	** .42	** .62	** .75	** .51	** .68	** .83	** .76	** .72	** .67	** .57	1.00		
22	** .62	** .48	** .61	** .55	** .59	** .45	** .74	** .61	** .45	** .54	.22	** .71	** .67	** .70	** .85	** .56	** .70	** .55	** .44	** .73	** .71	1.00	
23	** .68	** .41	** .62	** .56	** .44	** .49	** .63	** .62	** .42	** .45	* .34	** .65	** .79	** .58	** .71	** .81	** .65	** .73	** .73	** .67	** .85	** .71	1.00

Legend

Administrative Behavior

1 Liaison
2 Figurehead
3 Leader
4 Disseminator
5 Spokesperson
6 Monitor
7 Negotiator
8 Resource Allocator
9 Disturbance Handler
10 Entrepreneur

Structure

11 Formalization
12 Decentralization

Climate

13 Commitment
14 Cohesiveness
15 Empowerment

Specific School Attributes

16 Achievement Emphasis
17 Administrative Leadership
18 Support for School Activities
19 Student Attentiveness
20 Teacher Recognition

Global Measures

21 Overall Effectiveness
22 Overall Satisfaction
23 School Pride

* $p < .05$
** $p < .01$

APPENDIX B

Inventory of School Operations

INVENTORY OF SCHOOL OPERATIONS

The Inventory of School Operations(ISO) is designed to collect information about the operation of schools. The items contained in ISO have been devised to serve diagnostic and formative purposes. The data obtained are intended to assist school personnel in their efforts to increase the administrative effectiveness of schools. The validity of the inventory for any summative purposes has not been established.

Parts A, B, and C were adapted from E. Ratsoy and E. Miklos, Inventory of School District Operations(1984) with the permission of the developers.

Adapted by

Shirley S. Machura

Department of Educational Administration

University of Alberta

December, 1988

==========

Definitions: Throughout the inventory, school administrators include the principal, the assistant/vice principal(s), and the department head(s).

==========

PLEASE USE A COLOR OTHER THAN BLACK IN COMPLETING THE INVENTORY.

DO NOT PUT YOUR NAME ANYWHERE ON THIS INVENTORY. ALL DATA WILL BE SUMMARIZED BY SCHOOL ONLY.

INVENTORY OF SCHOOL OPERATIONS

Part A. Administrative Behavior

The items in this section refer to some possible actions or behaviors of administrators. For each item, please circle the appropriate number to indicate how frequently administrators (principal, assistant/vice principal(s), department heads) actually engage in each of the behaviors.

7 Always; 6 Almost Always; 5 Often; 4 Sometimes;

3 Seldom; 2 Almost Never; 1 Never

	Actual Frequency							Office Use Only
1. School administrators are present at social activities for members of staff.	7	6	5	4	3	2	1	5
2. School administrators are highly visible within the school to students and staff.	7	6	5	4	3	2	1	6
3. School administrators attend the school meetings to which parents are invited.	7	6	5	4	3	2	1	7
4. School administrators establish school-wide goals and programs through staff input and participation.	7	6	5	4	3	2	1	8
5. School administrators emphasize high standards of performance for students.	7	6	5	4	3	2	1	9
6. School administrators emphasize high standards of performance for staff.	7	6	5	4	3	2	1	10
7. School administrators assist staff members in finding solutions to problems.	7	6	5	4	3	2	1	11

7 Always; 6 Almost Always; 5 Often; 4 Sometimes;

3 Seldom; 2 Almost Never; 1 Never

	Actual Frequency							Office Use Only
8. School administrators serve as links between the school and the community.	7	6	5	4	3	2	1	12
9. School administrators are readily accessible to parents and other members of the public.	7	6	5	4	3	2	1	13
10. School administrators monitor the performance of staff members and provide feedback to them.	7	6	5	4	3	2	1	14
11. School administrators develop procedures for monitoring student performance.	7	6	5	4	3	2	1	15
12. School administrators ensure that courses are articulated across grade levels.	7	6	5	4	3	2	1	16
13. School administrators inform staff members about proposed policy changes.	7	6	5	4	3	2	1	17
14. School administrators inform parents about school activities.	7	6	5	4	3	2	1	18
15. When attending to educational issues with central office, school administrators represent the views of the school staff.	7	6	5	4	3	2	1	19

7 Always; 6 Almost Always; 5 Often; 4 Sometimes;

3 Seldom; 2 Almost Never; 1 Never

	Actual Frequency							Office Use Only
16. School administrators represent the views of the school staff in relating to the community or the media.	7	6	5	4	3	2	1	20
17. School administrators take the initiative in proposing educational change.	7	6	5	4	3	2	1	21
18. School administrators devise creative ways to improve the school.	7	6	5	4	3	2	1	22
19. School administrators establish a clear code of conduct regarding rules and regulations.	7	6	5	4	3	2	1	23
20. School administrators provide support for enforcement of discipline procedures.	7	6	5	4	3	2	1	24
21. School administrators respond to unexpected developments and/or problems with a plan for action.	7	6	5	4	3	2	1	25
22. School administrators make effective decisions in allocating the school financial and physical resources.	7	6	5	4	3	2	1	26
23. School administrators provide resources to enable staff to complete instructional tasks.	7	6	5	4	3	2	1	27
24. School administrators make their time available to staff members for consultation.	7	6	5	4	3	2	1	28

7 Always; 6 Almost Always; 5 Often; 4 Sometimes;

3 Seldom; 2 Almost Never; 1 Never

	Actual Frequency	Office Use Only
25. School administrators exercise diplomacy in relating to various organizations and interest groups.	7 6 5 4 3 2 1	29
26. School administrators manage decision making processes to the satisfaction of staff members.	7 6 5 4 3 2 1	30

Part B. Administrative Structure

The items in this section describe various characteristics of the structure of a school. For each item, please circle the appropriate number to indicate the actual extent to which the structural variable mentioned is presently characteristic of your school.

7 Very High; 6 High; 5 Moderately High; 4 Medium;

3 Moderately Low; 2 Low; 1 Very Low

Extent to Which:	Actual Extent	Office Use Only
1. School administrators use a manual of policies and procedural guidelines.	7 6 5 4 3 2 1	31
2. Policies and procedures for the operation of the school are formalized.	7 6 5 4 3 2 1	32
3. Explicit role definitions exist for each position in the administrative structure.	7 6 5 4 3 2 1	33
4. Authority relationships and channels of communication are clearly defined.	7 6 5 4 3 2 1	34

7 Very High; 6 High; 5 Moderately High; 4 Medium;
3 Moderately Low; 2 Low; 1 Very Low

Extent to Which:	Actual Extent							Office Use Only
5. Responsibilities for policy making and policy implementation are clearly designated.	7	6	5	4	3	2	1	35
6. Roles of school administrators are defined mainly in terms of providing support for teaching and learning.	7	6	5	4	3	2	1	36
7. Operational decisions are decentralized to department heads(or other units) in the school.	7	6	5	4	3	2	1	37
8. Task forces and committees are used in carrying out selected administrative functions.	7	6	5	4	3	2	1	38
9. Staff members have significant input into school policy decisions.	7	6	5	4	3	2	1	39
10. Staff members are encouraged to take the initiative in engaging in leadership-type activities.	7	6	5	4	3	2	1	40

Part C. School Climate

For each of the following items, please circle the appropriate number to indicate your degree of satisfaction with that particular aspect of the work climate in your school.

7 Very High; 6 High; 5 Moderately High; 4 Medium; 3 Moderately Low; 2 Low; 1 Very Low

	Degree of Satisfaction							Office Use Only
1. The extent to which members of staff have respect for each other.	7	6	5	4	3	2	1	41
2. The level of cooperation between members of staff and administrators.	7	6	5	4	3	2	1	42
3. The extent to which members of staff take pride in their work.	7	6	5	4	3	2	1	43
4. The extent to which members of staff share their concerns with one another.	7	6	5	4	3	2	1	44
5. The degree of trust between members of staff and administrators.	7	6	5	4	3	2	1	45
6. The extent to which members of staff are encouraged to be creative in carrying out their responsibilities.	7	6	5	4	3	2	1	46
7. The enthusiasm which members of staff have for their work.	7	6	5	4	3	2	1	47
8. The extent to which members of staff express a positive attitude about general working conditions.	7	6	5	4	3	2	1	48
9. The extent to which members of staff hold high expectations for student achievement.	7	6	5	4	3	2	1	49

7 Very High; 6 High; 5 Moderately High; 4 Medium;

3 Moderately Low; 2 Low; 1 Very Low

	Degree of Satisfaction							Office Use Only
10. The extent to which ideas of staff members have an impact on decisions regarding program or policy.	7	6	5	4	3	2	1	50
11. The extent to which new members of staff are made to feel a part of the group by other staff members.	7	6	5	4	3	2	1	51
12. The extent to which the unique characteristics of individual staff members are recognized and accepted.	7	6	5	4	3	2	1	52
13. The extent to which there is collaboration among members of staff in different positions.	7	6	5	4	3	2	1	53
14. The extent to which the staff members in the school are committed to working together as a faculty.	7	6	5	4	3	2	1	54
15. The extent to which the school staff works hard to maintain good relations with parents.	7	6	5	4	3	2	1	55
16. The extent to which the members of staff look for better ways to do their work.	7	6	5	4	3	2	1	56
17. The extent to which problems are regarded as opportunities to seek improvements.	7	6	5	4	3	2	1	57

7 Very High; 6 High; 5 Moderately High; 4 Medium;

3 Moderately Low; 2 Low; 1 Very Low

	Degree of Satisfaction							Office Use Only
18. The extent of opportunities available to staff members for professional growth and improvement.	7	6	5	4	3	2	1	58
19. The extent to which members of staff show kindness toward other staff members and students.	7	6	5	4	3	2	1	59
20. The degree of interest and caring teachers take in their students' learning.	7	6	5	4	3	2	1	60
21. Your degree of overall satisfaction with the working conditions in the school.	7	6	5	4	3	2	1	61

PART D. SECONDARY SCHOOL EFFECTIVENESS SURVEY

The items in this section refer to practices or conditions which contribute to effectiveness in schools. For each item, please circle the appropriate number to indicate the actual extent to which the particular practice or condition mentioned is presently characteristic of your school.

7 Very High; 6 High; 5 Moderately High; 4 Medium;

3 Moderately Low; 2 Low; 1 Very Low

Extent to Which:	Actual Extent							Office Use Only
1. Clear academic goals are established for the school.	7	6	5	4	3	2	1	62
2. Each individual student is achieving to his or her potential.	7	6	5	4	3	2	1	63
3. Student behavior within the school is orderly.	7	6	5	4	3	2	1	64

7 Very High; 6 High; 5 Moderately High; 4 Medium;
3 Moderately Low; 2 Low; 1 Very Low

Extent to Which:	Actual Extent							Office Use Only
4. Incentive and reward systems provide recognition for student achievement.	7	6	5	4	3	2	1	65
5. Student assessment information is used regularly to monitor student progress.	7	6	5	4	3	2	1	66
6. Students participate in extracurricular activities within the school.	7	6	5	4	3	2	1	67
7. Teachers are committed to achieving excellence in their teaching and related school activities.	7	6	5	4	3	2	1	68
8. Teachers are recognized and/or rewarded for excellent performance.	7	6	5	4	3	2	1	69
9. There are few disruptions in the school to distract student attention when students are in class.	7	6	5	4	3	2	1	70
10. Staff and students are proud of their school.	7	6	5	4	3	2	1	71
11. School administrators provide strong administrative leadership.	7	6	5	4	3	2	1	72
12. Courses within subject fields are articulated across the grades.	7	6	5	4	3	2	1	73
13. Parents provide support for school activities.	7	6	5	4	3	2	1	74
14. The extent to which your school is effective overall.	7	6	5	4	3	2	1	75

APPENDIX C

School Information Questionnaire

SCHOOL INFORMATION QUESTIONNAIRE

FOR EACH ITEM, PLEASE CHECK THE MOST APPROPRIATE ANSWER

1. School setting: (1) rural__, (2) village or small town__, (3) large town or small city__, (4) suburban area of a large city__, (5) medium size or large city__.
2. Grades served: (1) 7-12__, (2) 8-12__, (3) 9-12__, (4) 10-12__.
3. Number of students: (1) fewer than 100__, (2) 100-499__, (3) 500-999__, (4) 1 000-1 499__, (5) 1 500-1 999__, (6) 2 000__ or more__.
4. Number of full-time equivalent certified teachers: (1) Fewer than 24__, (2) 25-49__, (3) 50-100__, (4) more than 100__.
5. Number of assistant/vice principals: (1) One__, (2) two__, (3) three__, (4) four__, (5) five__, (6) more than five__.
6. Number of department heads: (1) none__, (2) one or two__, (3) three or four__, (4) five or six__, (5) seven or eight__, (6) more than eight__.

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE

APPENDIX D

Letters to Superintendents, Principals, and Teachers

LETTER TO SUPERINTENDENTS

Dr./Mr./Ms.
Superintendent of Schools
County/Division/District of

Dear Dr./Mr./Ms.

As part of the requirements for my Ph D program at the University of Alberta, I am conducting research on the administrative structure, organizational climate, and administrative behavior in senior high schools in Alberta. The overall purpose is to examine relationships among these variables and the relationships with indicators of school effectiveness.

The research involves collecting information by means of questionnaires distributed, in early January, to a sample of teachers in senior high schools throughout the province. I am, therefore, seeking permission to conduct the research in your jurisdiction. Confidentiality of all participants (jurisdictions, schools, and individual staff members) will be maintained.

Following permission from you to approach principals in your jurisdiction, I will contact each one individually to seek their agreement to participate in the study. The general outcomes of the study (as indicated above, no individuals, schools, or jurisdictions will be identified) will be shared with you and the principals. I would be grateful if you would commend the proposed study to the principals concerned.

I would be pleased to discuss this proposal with you or with any of your colleagues. My telephone number is 476-3289. My advisor at the University of Alberta is Dr. Eugene Ratsoy (telephone number: 432-3373). Your earliest reply will be much appreciated.

Yours sincerely,

Shirley S. Machura

LETTER TO PRINCIPALS

Dear Dr./Mr./Ms. (Principal)

As part of the requirements for my Ph D program at the University of Alberta, I am conducting research on the administrative structure, organizational climate, and administrative behavior in senior high schools in Alberta. The overall purpose is to examine relationships among these variables and the relationships with indicators of school effectiveness.

The research involves collecting information by means of questionnaires distributed in early January to a sample of staff members in senior high schools throughout the province. I am enclosing a sample of the questionnaire for your perusal. Anonymity of all participants (jurisdictions, schools, and individual staff members) and confidentiality of information obtained will be maintained. The general outcomes of the study, but not the findings for any one school in the study, will be shared with you and with your superintendent.

Your superintendent has agreed to allow me to conduct the research in your jurisdiction. I am now seeking permission from you to conduct the research in your school. Following agreement from you, I would randomly select the names of 20 teachers from your school staff list to whom I will send the questionnaires to be completed. For this purpose, I would need a list of the certified teachers on your staff. As well, I will require some demographic information about your school. I would greatly appreciate your completing the enclosed questionnaire and returning it, together with your school staff list, in the stamped self-addressed envelope provided. I would also be grateful if you would commend the proposed study to the teachers on your staff.

I would be pleased to discuss this proposal with you. My telephone number is 476-3289. My supervisor at the University of Alberta is Dr. Eugene Ratsoy (telephone number: 432-3373). Your earliest reply would be much appreciated.

Yours sincerely,

Shirley S. Machura

LETTER TO PRINCIPALS

Dear Dr./Mr./Ms. (Principal)

With your approval, I mailed to the teachers on your staff a questionnaire concerning administrative structure and behavior, organizational climate, and indicators of school effectiveness. I wish to thank those teachers that have taken the time to complete these questionniares. Their input is much appreciated.

However, I still have not received all of the completed questionnaires. I would be most grateful if you would encourage the members of your staff to forward their completed questionnaires to me in the stamped envelope which was provided. A high rate of return would ensure that the data accurately reflect the relationships among the variables and the relationships with the indicators of effectiveness. Your assistance in this matter is greatly appreciated.

Thank you for giving me approval to conduct the research in your school, for sending me your staff list, and for taking the time to complete the questionnaire concerning demographic information. Without your support, my research study would not be possible. The general outcomes of the study will be shared with you when the study is completed.

Once again, thank you for your interest and cooperation. I look forward to receiving the completed questionnaires.

Yours sincerely,

Shirley S. Machura

LETTER TO TEACHERS

Dear Teacher:

As part of the requirements for my Ph D program at the University of Alberta, I am conducting research on the administrative structure, organizational climate, and administrative behavior in senior high schools in Alberta. The overall purpose is to examine relationships among these variables and the relationships with indicators of school effectiveness. Permission to involve your schools has been obtained from the superintendent for your jurisdiction and from your principal.

I would be most grateful if you would complete the enclosed questionnaire. This should take approximately 20 minutes. Each questionnaire is given a school code because the analysis will focus on schools rather than on individual teachers. When the responses have been received, the list which links code numbers to schools will be destroyed. In this way, anonymity is assured.

A stamped envelope is provided for the return of your questionnaire. Thank you for your cooperation.

Yours sincerely,

Shirley S. Machura

APPENDIX E

Curriculum Vitae

CURRICULUM VITAE

Shirley Sylvia Machura
13404 - 71 Street
Edmonton, Alberta
T5C 0M8

HOME PHONE: (403) 476 - 3289

BUSINESS PHONE: (403) 542 - 5700 (Drayton Valley)

EDUCATION:

1991 Ph.D. (Educational Administration). University of Alberta.

1981 M.Ed.(Elementary Education), University of Alberta. Specialization in language arts, clinical route.

Thesis: "A Comparision of Good and Poor Grade Four Readers on Comprehension of Perceptual Connectives".

1973 B.Ed., University of Alberta. Course concentration in English/language arts, psychology, sociology.

TEACHING CERTIFICATE: Permanent Professional, Registered Number 3800-71.

CAREER HISTORY:

1990-91 Assistant Superintendent, West Central Alberta Catholic Schools (Includes Wetaskiwin RCSSD No. 15, Drayton Valley RCSSD No. 111, Ponoka, RCSSD No. 95, and Rocky Mountain House RCSSD No. 131).

1984-1990 Coordinator of the Diagnostic Evaluation Program, Student Evaluation Branch, Alberta Education

1987 (3 mo.) Acting Associate Director (Humanities) Student Evaluation and Records Branch, Alberta Education.

1978 - 1983	Remedial Reading Consultant, Edmonton RCSS District #7.
1975 -1978	Resource Room Teacher, Edmonton RCSS District #7
1973 - 1975	Junior High School Teacher, Edmonton RCSS District #7.
1959 - 1960, 1962 - 1973	Elementary Teacher, Edmonton RCSS District #7.
1958 -1959	Elementary Teacher, Smoky Lake School Division
SPECIAL ABILITY:	Registered with Learning Disabilities Fund, Alberta Education, to provide diagnostic services to children, and information to parents and other professionals regarding assessment results.
AWARDS:	
1988	Doreen E. Cohen Zeta Province Scholarship sponsored by the Delta Kappa Gamma Society International.
1981	Long Term Professional Leave granted by the Edmonton RCSS District #7, 1981.
PROFESSIONAL ACTIVITIES:	Member of the following organizations: English Language Arts Council International Reading Association Northern Alberta Reading Specialist Council Delta Kappa Gamma Society International Drayton Valley Chamber of Commerce
	Presentations given at the following conferences: Greater Edmonton Teachers' Convention Association, Canadian Council of Teachers of English, International Reading Association, Language Arts Council Conference, Early Childhood Education Council.

PUBLICATIONS:

Machura, S. (1988). A collegial inservice model. *Alberta English '88*, 26(2), 14-16.

Horvath, F.G., & Machura, S. (1987). Development of Alberta's diagnostic reading program. *Alberta English '87*, 25 (2), 4-7.

Machura, S. (1983). A reading curriculum in mathematics. *Reading-Canada-Lecture*, 2(4) December, 47-55.

Machura, S. (1982). A comparison of good and poor grade four readers on comprehension of perceptual connectives in discourse. *The Alberta Journal of Educational Research*. XXVIII (4), 291-300.

Machura, S. (1975) *Prefix pac*. Language Arts Junior High Uni-Pac, Curriculum Development Department, Edmonton Catholic Schools.

Machura, S. (1975). *Suffix pac*. Language Arts Junior High Uni-Pac, Curriculum Development Department, Edmonton Catholic Schools.

Machura, S., & Arseneau, C. (1973). *Junior high school grammar*. Language Arts Junior High Uni-Pac, Curriculum Development Department, Edmonton Catholic Schools.

SIGNIFICANT ACCOMPLISHMENT:

Coordinated the development of the *Diagnostic Reading Program* and the *Diagnostic Mathemantics Program*, currently used in Alberta elementary schools.